SAMSUNG

COLOR LASER PRINTER

Setup Guide

CLP-500
CLP-500N

Antes de operar el producto, por favor lea el instructivo,
a fin de evitar fallas y conserve para futuras referencias.

SAMSUNG

SAMSUNG LASER PRINTER

Setup Guide

CLP-500

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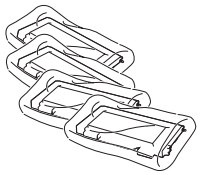
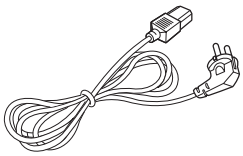
Step 1. Unpacking

1 Remove the printer and all of the accessories from the packing carton. Make sure that the printer has been packed with the following items:



Toner Cartridges



Power Cord

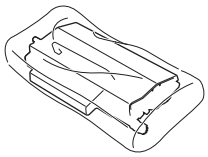
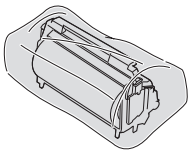
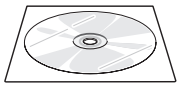


Image Transfer Unit



Drum Cartridge



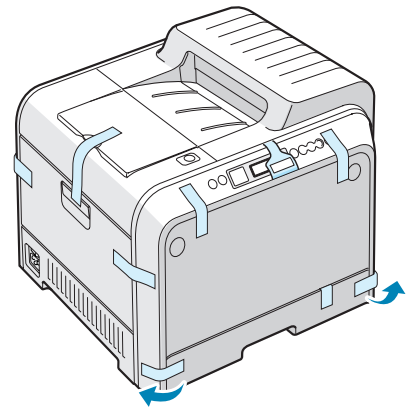
CD-ROM

Setup Guide

NOTES:

- If any items are missing or damaged, notify your dealer immediately.
- **Components may differ from one country to another.**
- The CD-ROM contains the printer driver, the User's Guide, and the Adobe Acrobat Reader program.
- The power cord may be different depending on your country.

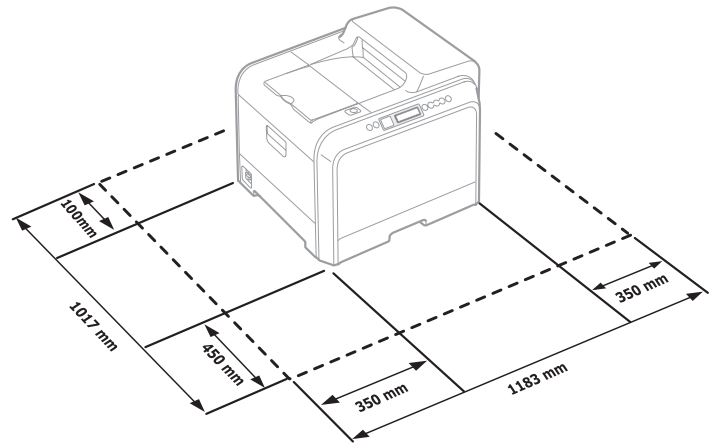
2 Carefully remove all of the packing tapes from the printer.



3 Pull the paper tray out of the printer and remove the packing tapes from the tray.

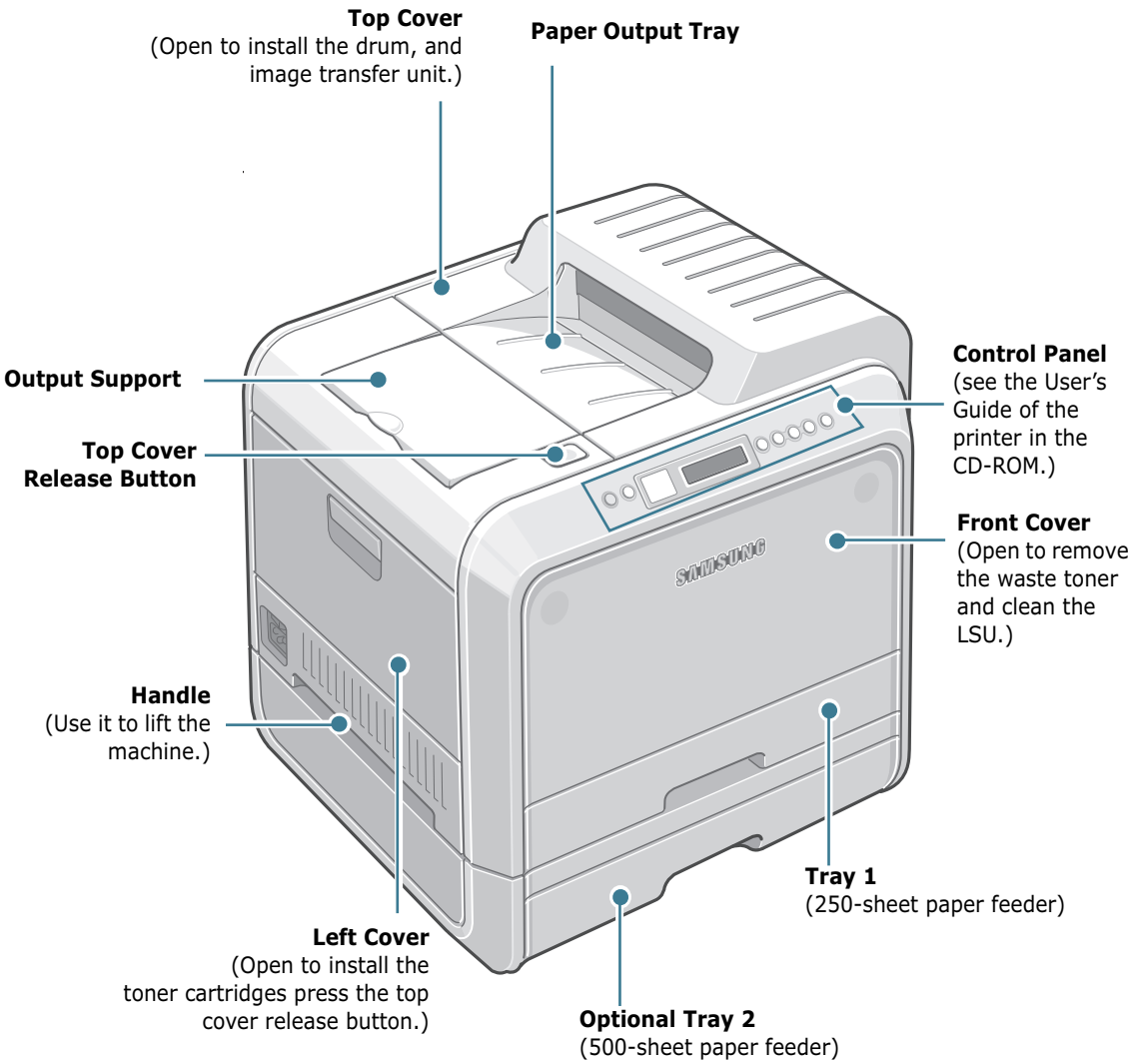
4 Select a location for the printer:

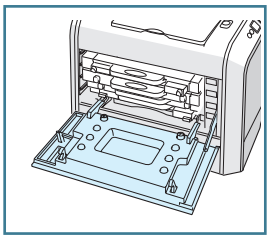
- Leave enough room to open the printer trays, covers, and allow for proper ventilation.
- Provide the proper environment:
  - A firm, level surface
  - Away from direct airflow of air conditioners, heaters, or ventilators
  - Free of temperature, sunlight, or humidity extremes or fluctuations
  - Clean, dry, and free of dust

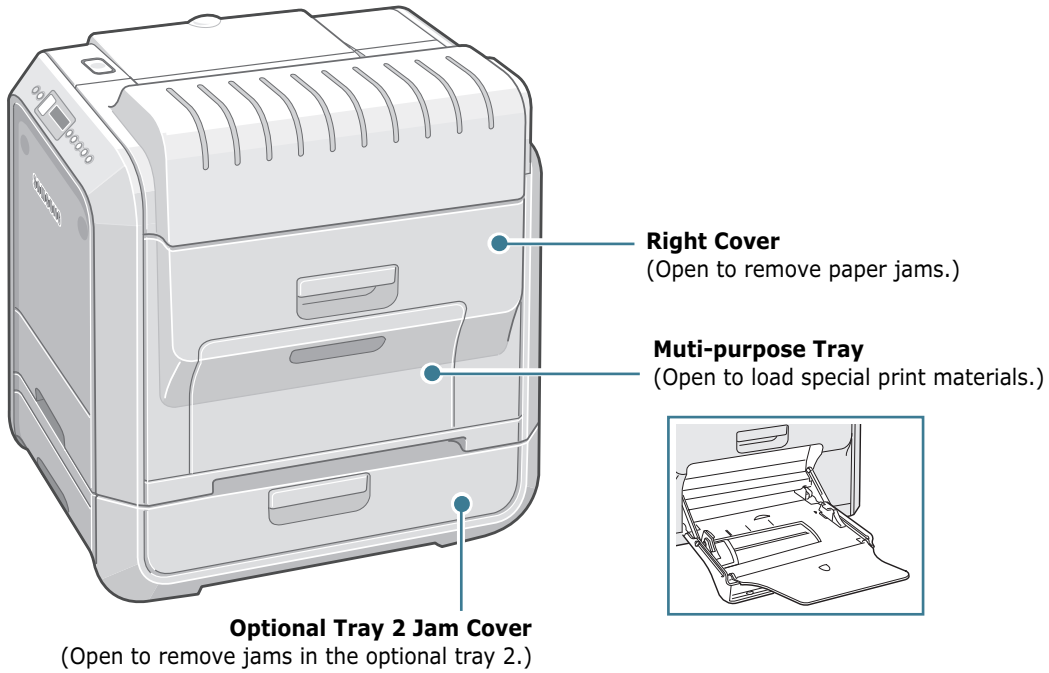


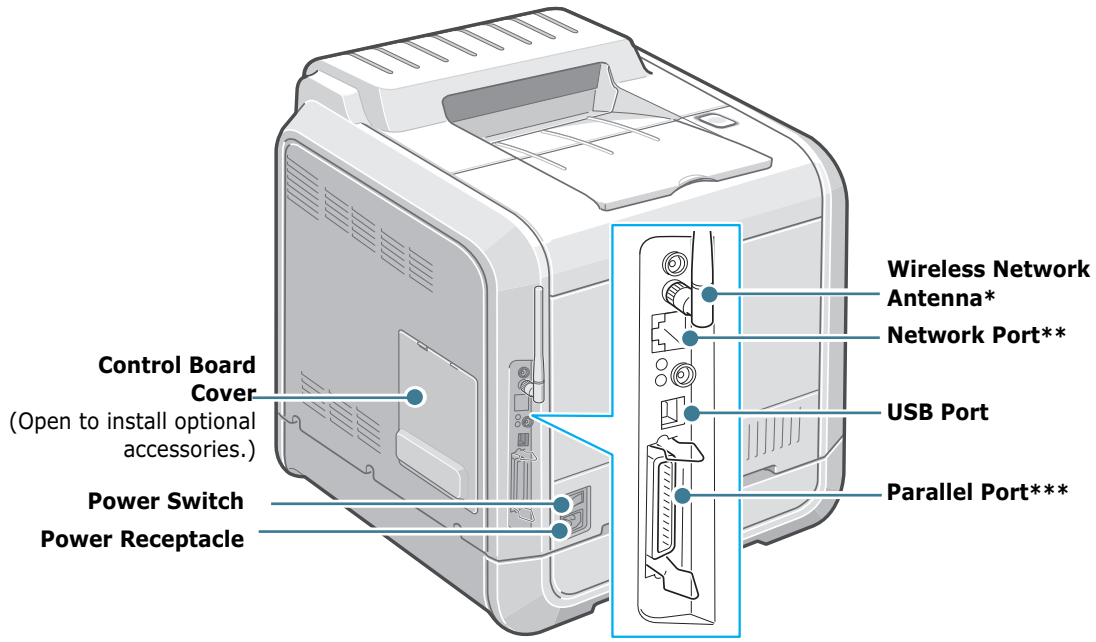
Step 2. Understanding Your Printer

These are the main components of your machine:


Top Cover
(Open to install the drum, and image transfer unit.)
Paper Output Tray
Output Support
Top Cover Release Button
Control Panel
(see the User's Guide of the printer in the CD-ROM.)
Front Cover
(Open to remove the waste toner and clean the LSU.)
Handle
(Use it to lift the machine.)
Left Cover
(Open to install the toner cartridges press the top cover release button.)
Tray 1
(250-sheet paper feeder)
Optional Tray 2
(500-sheet paper feeder)




Right Cover
(Open to remove paper jams.)
Muti-purpose Tray
(Open to load special print materials.)
Optional Tray 2 Jam Cover
(Open to remove jams in the optional tray 2.)



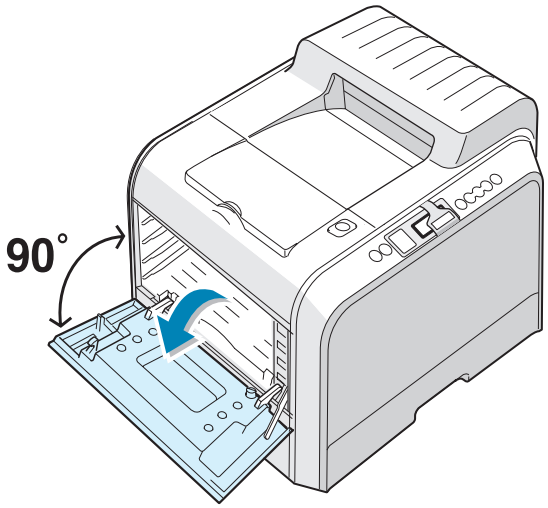
** This wireless network port is not available when you purchased the machine. You can install it using an option.*

*** The network port is provided at default for CLP-500N. CLP-500 users should install it using an optional network interface card. For details, see the User's Guide of the printer in the CD-ROM.*

**** The parallel port may not be available depending on your country.*

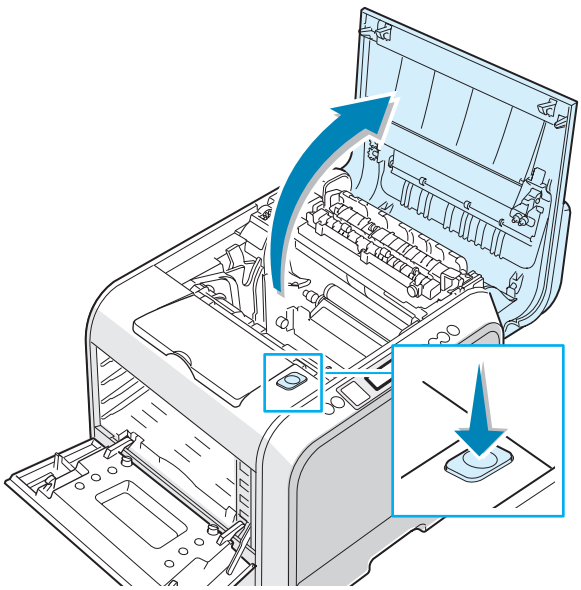
Step 3. Installing the Drum Cartridge, Image Transfer, and Toner Cartridges

1 Using the handle, open the left cover completely.

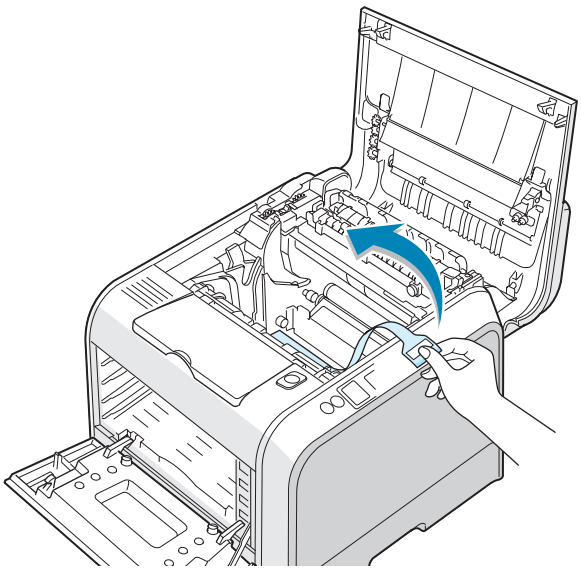


CAUTION: If the left cover is not completely open, the top cover release button does not press.

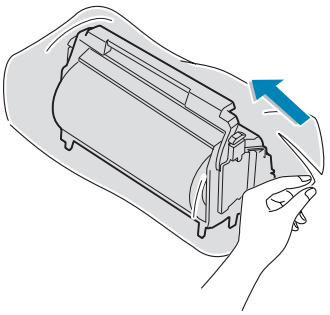
2 Press the top cover release button to unlatch the top cover and open it all the way.



3 Remove the LSU label.



4 Take the drum cartridge out of the package using the handle.

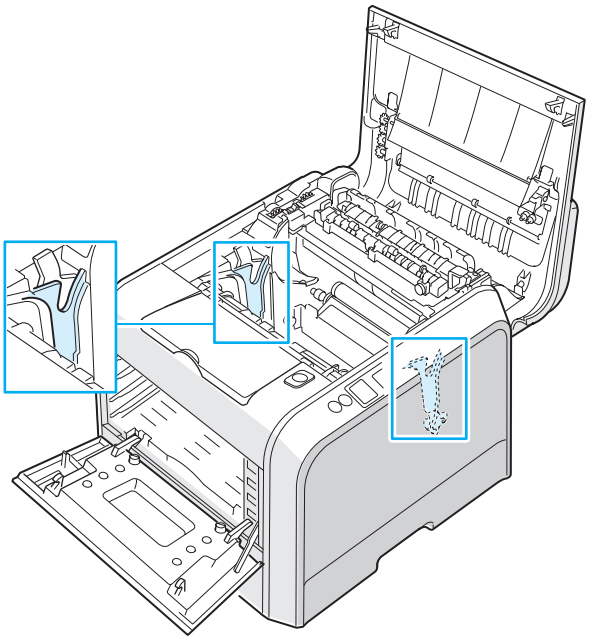


5 Remove the paper covering the drum cartridge by removing the tape under the handle of the drum cartridge.

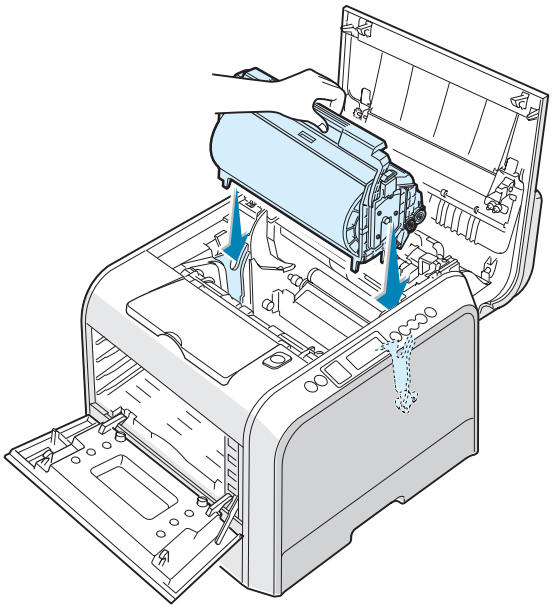
CAUTIONS:

- Don't use sharp objects, such as a knife or scissors, to open the drum cartridge package. You could damage the surface of the drum.
- To prevent damage, do not expose the drum cartridge to light for more than a few minutes. Cover it with black paper, if necessary.
- Do not touch the surface of the green roller on the drum cartridge or print quality problems can occur.

6 Locate the drum cartridge slots inside the printer, one on each side.

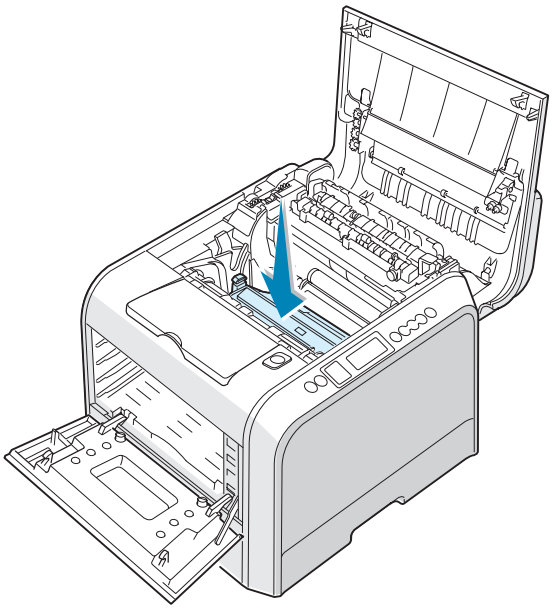


7 Hold the handle on the drum cartridge with the green roller facing you. Then align the drum cartridge with the slots in your printer.



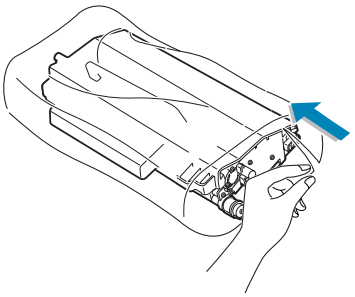
CAUTION: Insert the drum cartridge carefully so as not to scratch and damage the surface of the green roller.

8 Slide the drum cartridge down into the printer until it latches into place and fold the handle down.



CAUTION: To prevent damage, do not expose the drum cartridge to light for more than a few minutes.

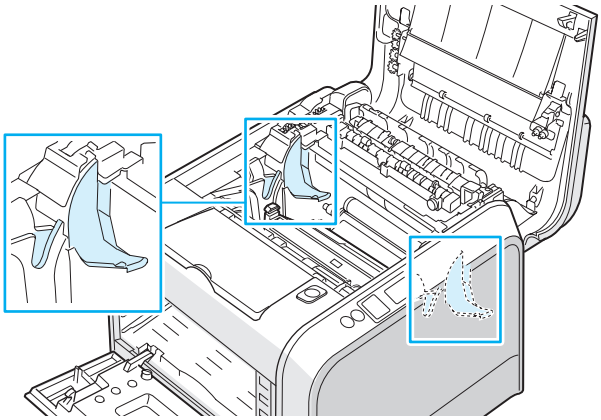
9 Take the image transfer unit out of the package.



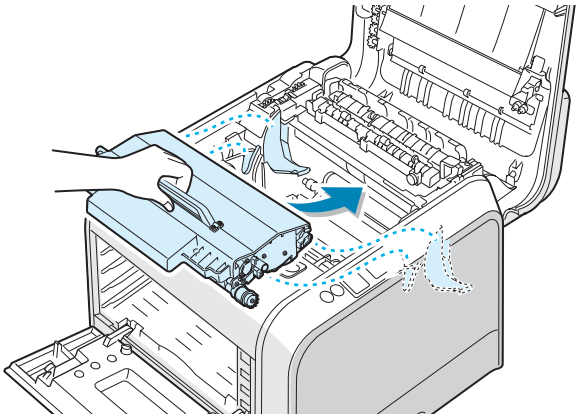
10 Remove the paper covering the image transfer unit by removing the tape under the handle of the image transfer unit.

CAUTION: Don't use sharp objects, such as a knife or scissors, to open the image transfer unit package. You could damage the surface of the image transfer.

11 Locate the image transfer unit slots inside the printer, one on each side.

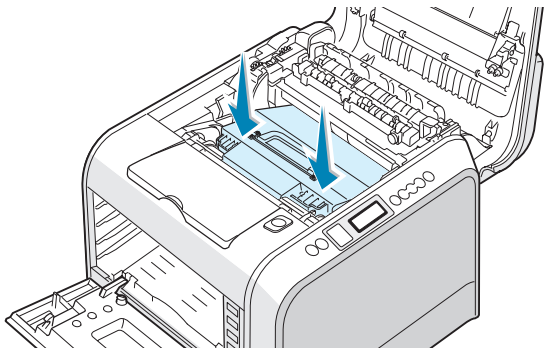


12 Hold the handle on the image transfer unit and align it with the slots in your printer.

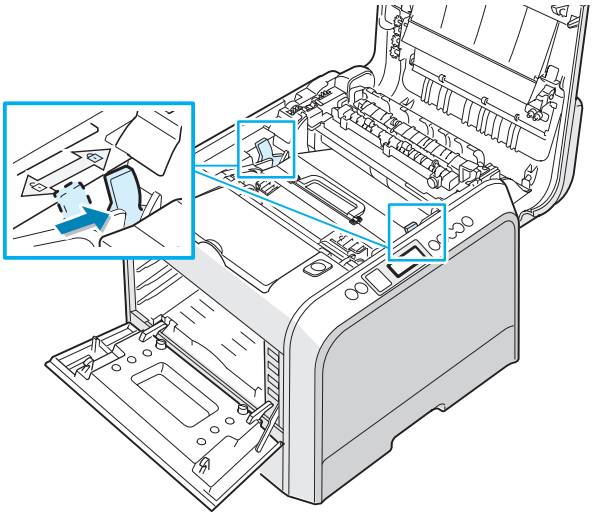


NOTE: Do not turn the transfer unit over. If you do this, the toner may spill.

13 Slide the image transfer unit down into the printer. Press it firmly to make sure that it latches into place.

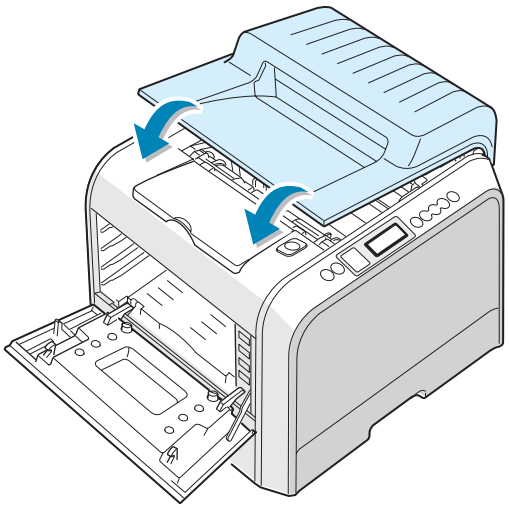


14 Firmly push the lock levers on each side away from you, as shown below, to lock the image transfer unit into place.



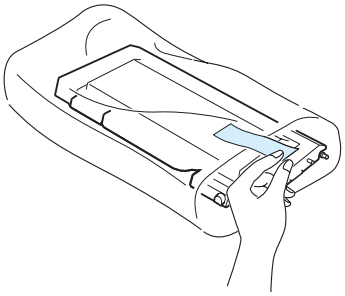
CAUTION: If you open the left cover for a long time, the drum cartridge can be exposed to light. This causes damage to the drum cartridge.

15 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.



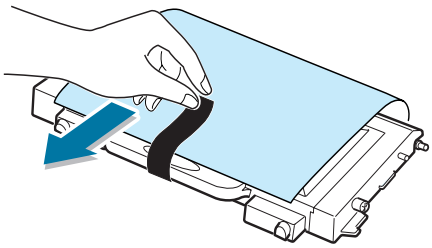
CAUTION: Do not try to close the top cover with the left cover closed. This may cause damage to the machine.

16 Take the toner cartridges out of their packages.

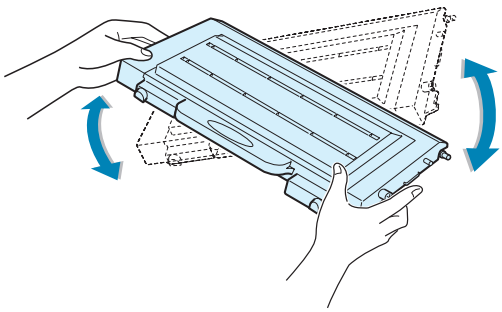


CAUTIONS: Do not use sharp objects, such as a knife or scissors, to open the toner cartridges packages. You could damage the surface of the toner cartridges.

17 Place the toner cartridges on a flat surface as shown and remove the paper covering the toner cartridge by removing the tape.

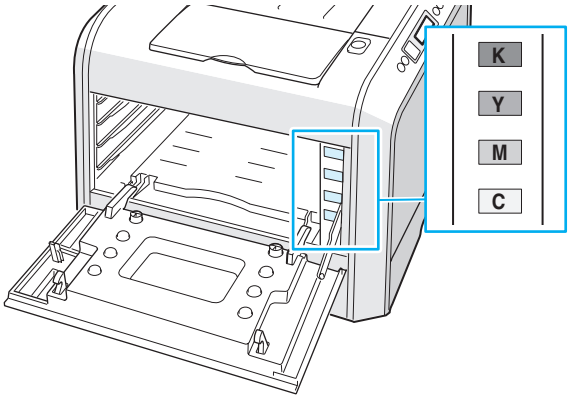


18 Holding both sides of the cartridges, gently roll them from side to side to distribute the toner.

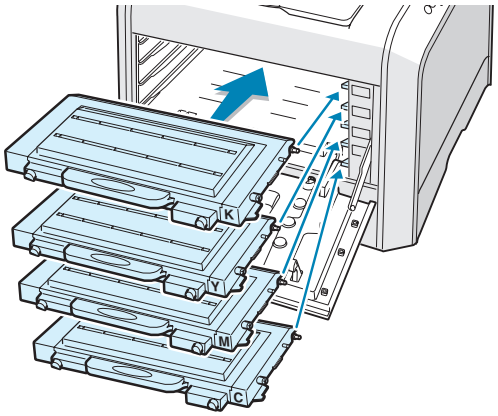


NOTE: If toner gets on your clothing, wipe it off with a dry cloth and wash it in cold water. Hot water sets toner into fabric.

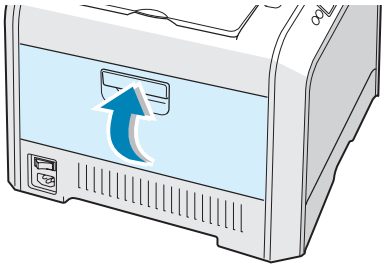
19 Look inside the printer on the right and then locate the color of the toner cartridges that matches the color of the slot.



20 Holding each toner cartridge, insert them into their corresponding positions shown in order of Cyan, Magenta, Yellow and then Black.

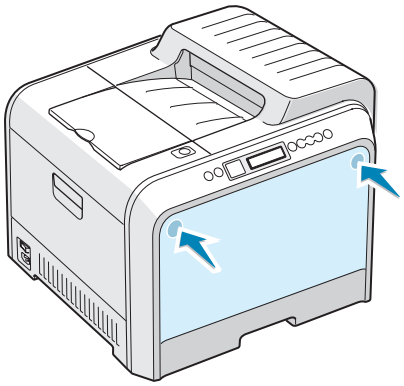


21 Close the left cover. Make sure that it is securely latched.

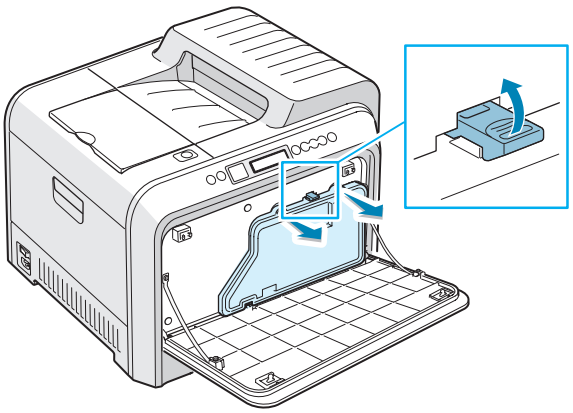


NOTE: When printing text at 5% coverage, you can expect a toner cartridge life of about 7,000 pages for black and 5,000 pages for color. However, the toner cartridge that is shipped with the printer prints 2,000 pages for black and white, 1,500 pages for color.

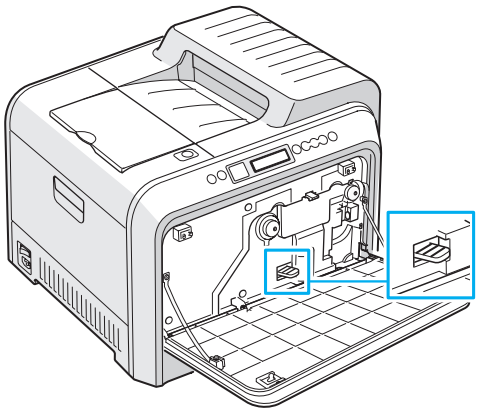
22 To unlatch the front cover, quickly press and release it using the depressions at the top.



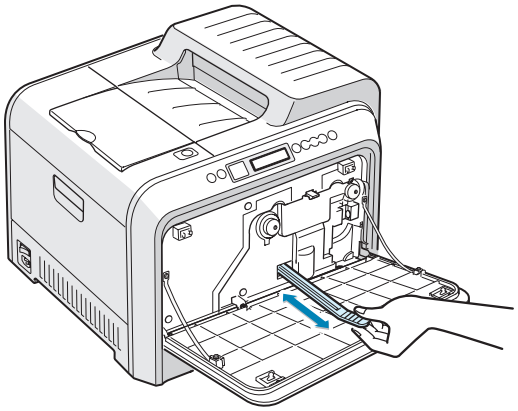
23 Push the lock lever up and pull the waste toner container out.



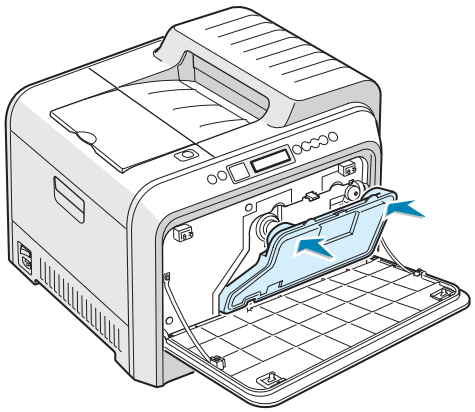
24 Locate the supplied LSU cleaner on the bottom.



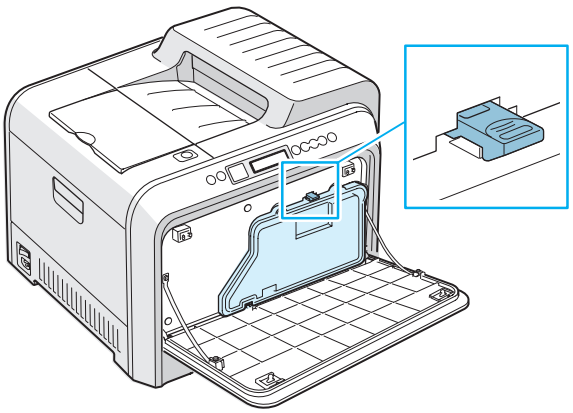
25 Holding the end of the cleaner, slide it in and out several times.



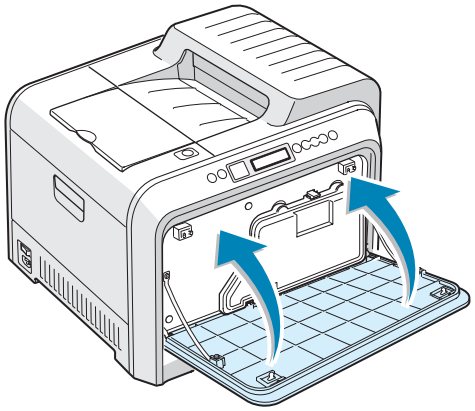
26 Slide the cleaner back into place and then replace the lower of the waste toner container and then push it to make sure that it is seated in place.



27 Make sure that the lock lever latches the container.



28 Close the front cover. Make sure that it is securely latched.



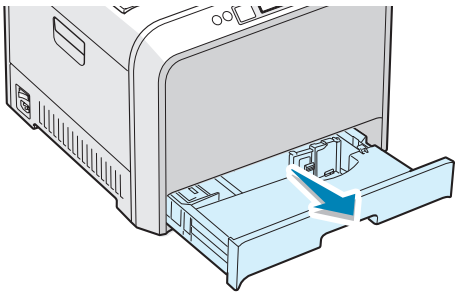
Make sure that the left and right side of the front cover are closed firmly.

Step 4. Loading Paper

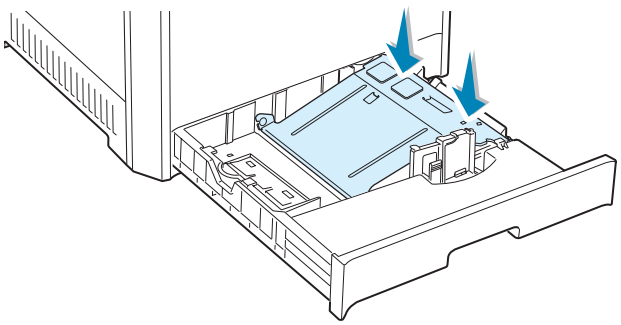
The tray (Tray 1) can hold a maximum of 250 sheets of plain paper. You can use A4 and letter-sized paper.

To load paper:

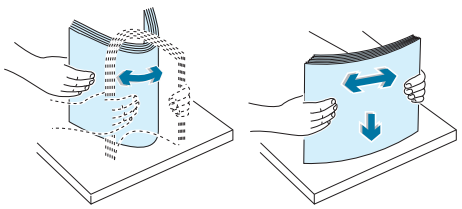
1 Pull the tray out of the printer.



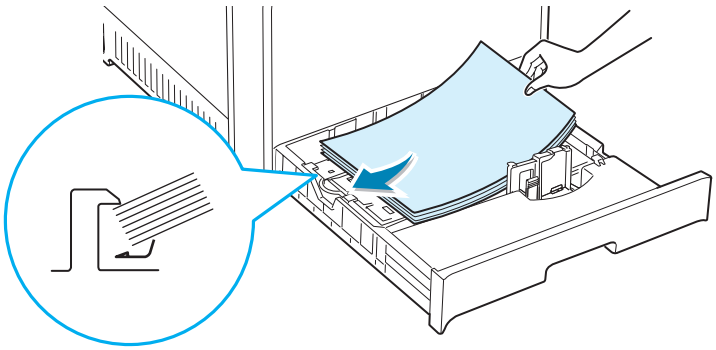
2 Push down on the metal plate until it locks into position.



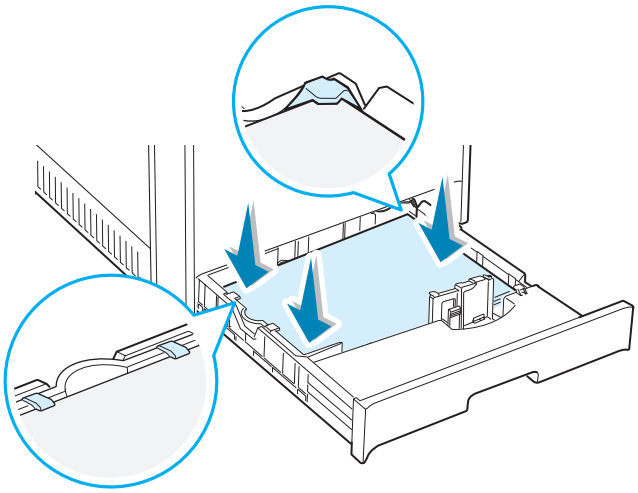
3 Flex the paper sheets back and forth to separate the pages and then fan them while holding one edge. Tap the edges of the stack on a flat surface to even it up.



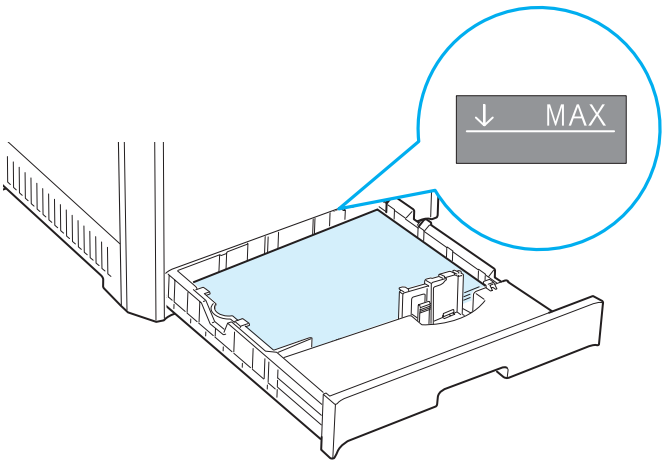
4 Load paper **with the print side facing up**.



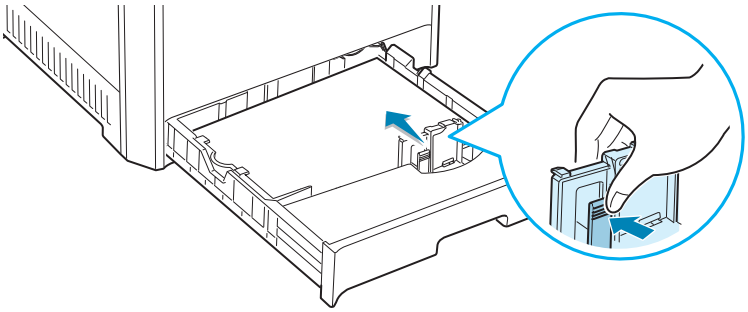
Make sure that all four corners are flat in the tray and under the following corner brackets.



5 Do not exceed the maximum stack height. Overfilling the tray may cause a paper jam.

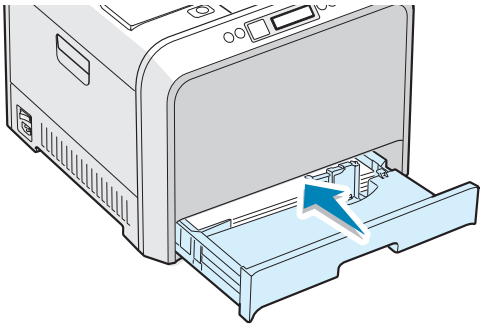


6 Pinch the paper guide as shown and move it toward the paper until it lightly touches the side of the stack. Do not press the guide too tightly against the edge of the paper; the guide may bend the paper.



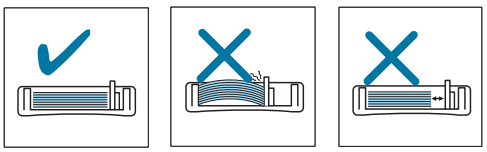
NOTE: If you want to change the paper size in the tray, refer to the User's Guide of your printer supplied in the CD-ROM.

7 Slide the tray back into the printer.



NOTES:

- Do not push the width guide far enough to cause the material to warp.
- If you do not adjust the width guide, it may cause paper jam.



Step 5. Connecting a Printer Cable

You need to connect your printer to the computer with either a parallel interface cable or a Universal Serial Bus (USB) cable.

If you are a Macintosh user, you can use only a USB cable.

Using a Parallel Cable

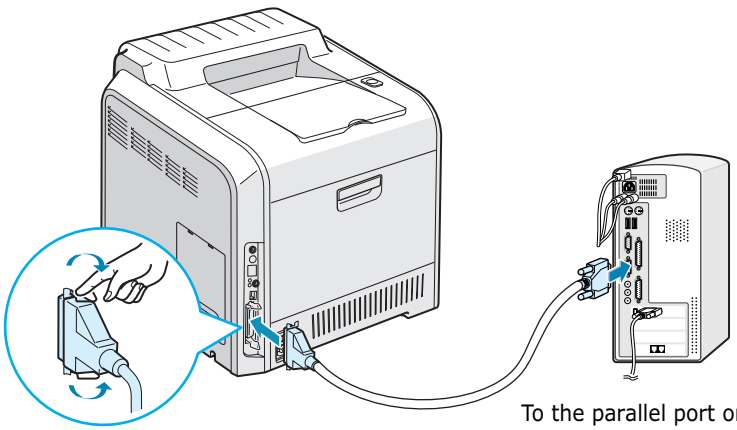
NOTES:

- The parallel port may not be available depending on your country.
- To connect the printer to the parallel port of the computer requires a certified parallel cable. You need to buy a IEEE1284 compliant cable that is within 3m in length.

1 Make sure that both the printer and the computer are turned off.

2 Plug the parallel printer cable into the connector on the back of the printer.

Push the metal clips down to fit inside the notches on the cable plug.



3 Connect the other end of the cable to the parallel interface port on your computer, and tighten the screws.

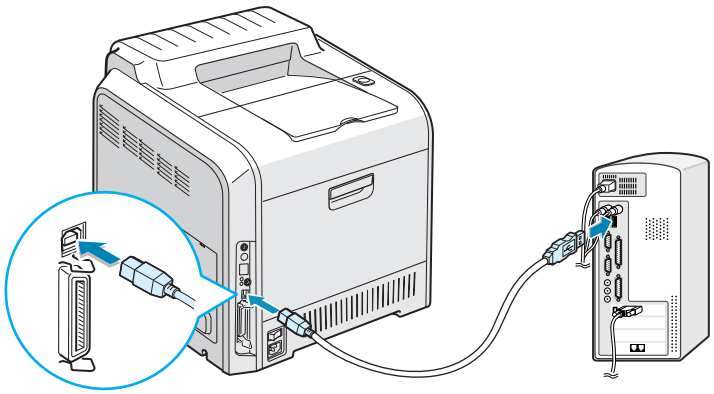
See the User's Guide of your computer, if you need help.

Using a USB Cable

NOTE: Connecting the printer to the USB port of the computer requires a certified USB cable. You will need to buy a USB 2.0 compliant cable that is within 3m in length.

1 Make sure that both the printer and the computer are turned off.

2 Plug the USB printer cable into the connector on the back of the printer.



To the USB port on your computer

3 Connect the other end of the cable to the USB port on your computer.

See the User's Guide of your computer, if you need help.

NOTES:

- To print using the USB interface, you must run Windows 98/Me/2000/XP, or Macintosh with OS 8.6 and the G3 processor or higher.
- In Windows 98/Me, if you want to print using the USB interface, you must install the USB driver to add the USB port. See page 28.

For Networking Printing

You can attach your CLP-500 or CLP-500N printer to a network using an Ethernet cable (UTP cable with RJ.45 connector).

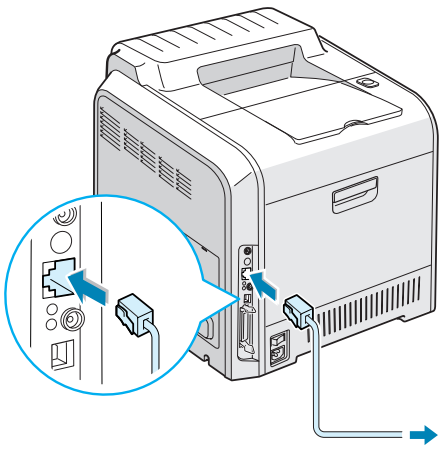
CLP-500N has a built-in network interface card. If you are a CLP-500 user, you need to install an optional network interface card.

If you want to use the printer in both a wired and a wireless network environments, you need to install an optional wired/wireless network interface card. For details about installing the card, see the User's Guide of your printer in the CD-ROM.

Using an Ethernet cable

1. Make sure that both the printer and the computer are turned off.

2. Plug one end of the Ethernet cable into the Ethernet network port on the Printer.



3. Plug the other end of the cable into a network LAN connection.

   For details about installing the network card, see the User's Guide of your printer in the CD-ROM.

Using a network antenna

1 If you install the wired/wireless network card, you can use your printer in wireless environment.

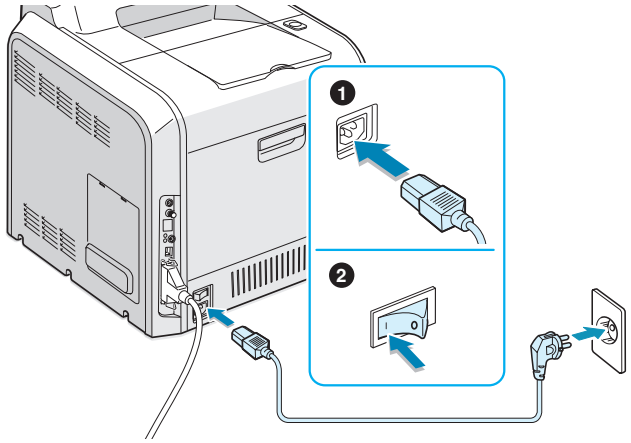
For details about installing the wired/wireless network card, see the User's Guide of your printer in the CD-ROM.

NOTE: After connecting the printer you need to configure the network parameters on the control panel. See the User's Guide of your printer. You can use the software supplied with the card. Refer to the software User's Guide.

Step 6. Turning the Printer On

1 Plug the power cord into the power receptacle on the back of the printer.

2 Plug the other end into a properly grounded AC outlet and turn on the power.



CAUTIONS:

- Some parts inside of the printer may be hot when powered. Be careful not to be burned when accessing inside the printer.
- Do not disassemble the printer when it is powered. Doing so may give you an electric shock.

Step 7. Printing a Demo Page

Print a demo page to make sure that the printer is operating correctly.

3 In ready mode press the **Menu** button ( ) on the control panel until you see 'Information' on the bottom line of the display.

4 Press the **Enter** button ( ) to access the menu.

5 Press the scroll button (or) until you see 'Demo Page' on the bottom line.

6 Press the **Enter** button ( ).

A demo page showing the printer's features and capabilities prints out.

Step 8. Changing the Display Language

To change the language that is displayed on the control panel, take the following steps:

1. In ready mode press the **Menu** button ( ) on the control panel until you see 'Setup' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until you see 'LCD Language' on the bottom line.
4. Press the **Enter** button ( ) to confirm the menu item.
5. Press the scroll button (or) to display the language you want to use.
6. Press the **Enter** button ( ) to save the selection.
7. Press the **On-Line/Continue** button ( ) to return to ready mode.

Step 9. Installing the Printer Software

The supplied CD-ROM contains Windows printing software, Macintosh printing software, Linux printing software, on-line User's Guide and Acrobat Reader to view the User's Guide.

If you are printing from Windows:

You can install the following printer software using the CD-ROM.

- **Printer Driver** for windows. Use this driver to take full advantage of your printer's features. See the bellow.
- **USB driver** only for Windows 98/Me/2000/XP. For details about installing the USB driver, see page 28.

If you are printing from Macintosh:

For information about installing the print software and printing from a Macintosh, refer to the Using Your Print with a Macintosh section in the User's Guide in the CD-ROM.

If you are printing in Linux:

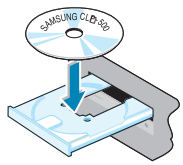
For information about installing the Linux driver, refer to the Using Your Printer in Linux section in the User's Guide of the printer in the CD-ROM.

Installing Printer Software in Windows

Verify the following before you install the printer software:

Item	Requirements	
Operating system	Windows 95/98/Me/NT 4.0/2000/XP	
RAM	95/98/Me	32 MB
	NT 4.0/2000	64 MB
	XP	128 MB
Free disk space	95/98/Me/NT 4.0/ 2000/XP	200 MB
Internet Explorer	5.0 or higher	

All applications should be closed on your PC before beginning installation.



1 Place the CD-ROM in the CD-ROM drive. Installation will start automatically.

If the CD-ROM drive does not automatically run:

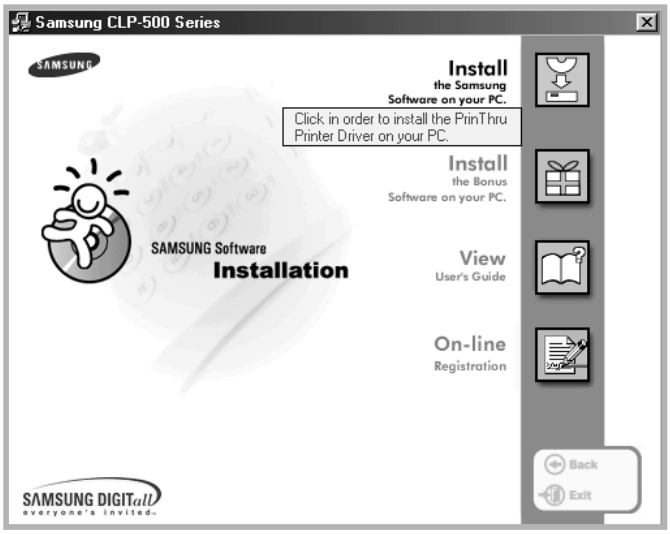
Select **Run** from the **Start** menu, and type **x:\cdsetup.exe** in the Open box (where **x** is the drive letter for the CD-ROM drive), then click **OK**.

NOTE: If the **New Hardware Found** window appears during the installation procedure, click ☒ in the upper right corner of the box, or click **Cancel**.

2 When the language selection window appears, select the appropriate language.

If you can't find the desired language from the screen, scroll through the screen using the scroll button on the bottom right of the screen.

3 Click **Install the Samsung Software on your PC.**



4 The installation window opens. Click **Next**.

5 Follow the instructions on the window to complete the installation.

NOTE:If you connect the printer with the USB cable at first and then you want to use the parallel interface, remove the USB cable and connect the parallel cable. Then reinstall the printer driver.

Reinstalling Printer software

Reinstallation is required if your installation fails.

1. From the **Start** menu, select **Programs**.
2. Select **Samsung CLP-500 Series**, and then **Samsung CLP-500 Series Driver Maintenance**.
3. The Samsung CLP-500 Series Driver Maintenance window appears. Click **Repair** and then click **Next**.
4. When reinstallation is done, click **Finish**.

Removing Printer software

1. From the **Start** menu, select **Programs**.
2. Select **Samsung CLP-500 Series**, and then **Samsung CLP-500 Series Driver Maintenance**.
3. The Samsung CLP-500 Series Driver Maintenance window appears. Check **Remove** and then click **Next**.
4. When you are asked to confirm your selection, click **OK**.

   The Samsung CLP-500 Series printer driver and all of its components are removed from your computer.
5. When removing is completed, click **Finish**.

Changing the Display Language

After installation of the software, you can change the display language.

1. From the **Start** menu, select **Programs**.
2. Select **Samsung CLP-500 Series**, and **Language Selection**.
3. Select the desired language from the language selection window, and click **OK**.

Step 10. Viewing the User's Guide

The Samsung CLP-500 Series User's Guide, which is in the software CD-ROM, is in Adobe Acrobat PDF format. The manual will give you flexibility and convenience when you have to access information.

You can view the manuals on-screen in different formats (viewing a single page, continuous single page or continuous facing page, zooming in up to 1600% or out up to 12.5%, scrolling two-up page or article flow). You can also print the manual, if necessary.

In Windows

1. Place the CD-ROM in the CD-ROM drive.
2. When the language selection window appears, select the appropriate language.
3. Click **View User's Guide**.

   The Adobe Acrobat program opens and you can view the User's Guide.

NOTE: To open the User's Guide, you should install the Adobe Acrobat Reader program on your computer. If you do not have the program, click **Install the Bonus Software on your PC** to install the program.

In Macintosh

1. Place the CD-ROM in the CD-ROM drive.
2. Double-click **SAMSUNG_CLP** on your Macintosh desktop.
3. Double-click **West** folder.
4. Double-click **User's Guide.pdf** next to each language. The Adobe Acrobat programme opens and you can view the User's Guide.

In Linux

1 When the Administrator Login window appears, type in "**root**" in the login field and enter the system password.

2 Insert the printer software CD-ROM.

3 Click the icon at the bottom of the screen. When the terminal screen appears, type in:
[root@local /root]# **cd /mnt/cdrom**(the CD-ROM directory) ↵
[root@local cdrom]# **gv manual/EnGuide.pdf** ↵

NOTE: If your ghostscript version is old, you may not be able to see the pdf file. Then, install Acrobat Reader on your system or try to read the User's Guide on a Windows system.

1. Click the icon at the bottom of the screen. When the terminal screen appears, type in:
   [root@local /root]**# cd /mnt/cdrom**(the CD-ROM directory) ↵
   [root@local cdrom]**# manual/acrobat4/INSTALL** ↵
2. After reading the license agreement, type **accept** ↵.
3. When you are asked of the installation directory, just type the enter key.
4. You need to make a symbolic link to execute Acrobat Reader without full path:
   [root@local cdrom] **# ln -s/ usr/local/acrobat4/bin/acroread /usr/bin/acroread** ↵
5. Now, you can read the pdf files with Acrobat Reader.
   [root@local cdrom]# **acroread /mnt/cdrom/manual/EnGuide.pdf** ↵

MEMO

Visit us at:
www.samsungprinter.com

Home

Rev.0.06

SAMSUNG

COLOR LASER PRINTER

User's Guide

CLP-500
CLP-500N

For UK customers:
To reorder your consumables
Call 0800 3164060
For Technical Assistance
Call 0870 2420303

This manual is provided for information purposes only. All information included herein is subject to change without notice. Samsung Electronics is not responsible for any changes, direct or indirect, arising from or related to use of this manual.

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Environmental and Safety Consideration

Laser Safety Statement

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class I(1) laser products, and elsewhere, is certified as a Class I laser product conforming to the requirements of IEC 825.

Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

WARNING
Never operate or service the printer with the protective cover removed from Laser/ Scanner assembly. The reflected beam, although invisible, can damage your eyes. When using this product, these basic safety precautions should always be followed to reduce risk of fire, electric shock, and injury to persons:

CAUTION - INVISIBLE LASER RADIATION WHEN THIS COVER OPEN. DO NOT OPEN THIS COVER.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.

ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.

PRECAUCIÓN - RADIACIÓN LASER INVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.

PERIGO - RADIAÇÃO LASER INVISÍVEL AO ABRIR. EVITE EXPOSIÇÃO DIRECTA AO FEIXE.

GEVAAR - ONZICHTBARE LASERSTRALEN BIJ GEOPENDE KLEP. DEZE KLEP NIET OPENEN.

ADVARSEL. - USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

ADVARSEL. - USYNLIG LASERSTRÅLNING NÅR DEKSEL ÅPNES. STIRR IKKE INN I STRÅLEN. UNNGÅ EKSPONERING FOR STRÅLEN.

VARNING - OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPEN OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. STRÅLEN ÄR FARLIG.

VARO! - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER-SÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.

注 意 - 严禁揭开此盖, 以免激光泄露灼伤

주 의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로 주의하십시오.

Ozone Safety

During normal operation, this machine produces ozone. The ozone produced does not present a hazard to the operator. However, it is advisable that the machine be operated in a well ventilated area.

If you need additional information about ozone, please contact your nearest Samsung dealer.

Power Saver

This printer contains advanced energy conservation technology that reduces power consumption when it is not in active use.

When the printer does not receive data for an extended period of time, power consumption is automatically lowered.

The energy star emblem does not represent EPA endorsement of any product or service.

Recycling

Please recycle or dispose of packaging materials for this product in an environmentally responsible manner.

Radio Frequency Emissions

FCC regulations

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

Canadian Radio Interference Regulations

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Industry and Science Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", ICES-003 édictée par l'Industrie et Sciences Canada.

United States of America

Federal Communications Commission (FCC)

Intentional emitter per FCC Part 15

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your printer system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your printer, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operation in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions:(1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

FCC Statement for Wireless LAN use:
"While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device can not be colocated with another transmitter and transmitting antenna."

Declaration of Conformity (European Countries)

Approvals and Certifications

The CE marking applied to this product symbolises Samsung Electronics Co., Ltd. Declaration of Conformity with the following applicable 93/68/EEC Directives of the European Union as of the dates indicated:

January 1, 1995: Council Directive 73/23/EEC Approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC (92/31/EEC), approximation of the laws of the Member States related to electromagnetic compatibility.

March 9, 1999: Council Directive 1999/5/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

A full declaration, defining the relevant Directives and referenced standards can be obtained from your Samsung Electronics Co., Ltd. representative.

EC Certification

Certification to 1999/5/EC Radio Equipment & Telecommunications Terminal Equipment Directive (FAX)

This Samsung product has been self-certified by Samsung for pan-European single terminal connection to the analogue public switched telephone network (PSTN) in accordance with Directive 1999/5/EC. The product has been designed to work with the national PSTNs and compatible PBXs of the European countries:

In the event of problems, you should contact the Euro QA Lab of Samsung Electronics Co., Ltd. in the first instance.

The product has been tested against TBR21 and/or TBR 38. To assist in the use and application of terminal equipment which complies with this standard, the European Telecommunication Standards Institute (ETSI) has issued an advisory document (EG 201 121) which contains notes and additional requirements to ensure network compatibility of TBR21 terminals. The product has been designed against, and is fully compliant with, all of the relevant advisory notes contained in this document.

European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a printer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band, may be present (embedded) in your printer system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark with CE a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you printer is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

European States qualified under wireless approvals:

EU Austria, Belgium, Denmark, Finland, France (with frequency restrictions), Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the United

Accept EU Iceland, Liechtenstein, Norway and Switzerland

European States with restrictions on use:

EU In France, the frequency range is restricted to 2446.5-2483.5 MHz for devices above 10 mW transmitting power such as wireless

Accept EU No limitations at this time.

Regulatory Compliance Statements

Wireless Guidance

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your printer system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your printer is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your printer) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include

extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

This transmitter must not be collocated or operation in conjunction with any other antenna or transmitter.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:

Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11B (also known as wireless Ethernet) and Bluetooth communication devices are examples of devices that provide wireless communication.

In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.

Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.

If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.

Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

EU Declaration of Conformity (LVD,EMC)

For the following product :

Color Laser Beam Printer

(Product name)

CLP-500, CLP-500N

(Model Number)

Manufactured at :

Samsung Electronics Co.,Ltd #259. GongDan-Dong,Gumi-city, GyungBuk, KOREA 730-030

(factory name, address)

We hereby declare, that all major safety requirements, concerning to CE Marking Directive[93/68/EEC] and Low Voltage Directive [73/23/EEC], ElectroMagnetic Compatibility [89/336/EEC], amendments [92/31/EEC] are fulfilled, as laid out in the guideline set down by the member states of the EEC Commission.
This declaration is valid for all samples that are part of this declaration, which are manufactured according to the production charts appendix.
The standards relevant for the evaluation of safety & EMC requirements are as follows :

1. Certificate of conformity / Test report issued by :

LVD : EN 60950:1992 +A1+A2+A3+A4+A11,EN 60825-1:1994+A1

EMC : EN 55022:1998, EN 61000-3-2:1995 inc+A1+A2:1998

EN61000-3-3:1995,EN 55024:1998

2. Technical documentation kept at :

LVD : TUV Rheinland

EMC : SAMSUNG Electronics Kihung Lab. in the KOREA

which will be made available upon request.

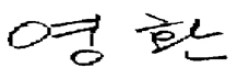
Samsung Electronics Co.,Ltd

(Manufacturer)

Samsung Electronics co.,ltd
#259,KongDan-Dong,GuMi-City
KyungBuk, Korea 730-030

2001-12-06

(place and date of issue)



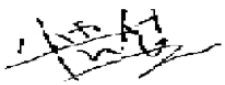
Yong Hwan Kim / Senior Manager

(name and signature of authorized person)

(Representative in the EU)

Samsung Electronics Euro QA Lab.
Blackbushe Business Park,Saxony Way,
Yateley, Hampshire,GU46 6GG, UK
2001-12-10

(place and date of issue)



In-Seop Lee / Manager

(name and signature of authorized person)

MEMO

1 INTRODUCTION

Congratulations on the purchase of your printer!

This chapter includes:

- **Special Features**
- **Printer Components**
- **Changing the Display Language**

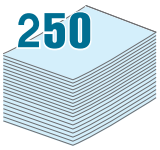
Special Features

Your new printer is equipped with special features that improve the print quality. You can:

Print in color with excellent quality and speed

- You can print in a full range of colors using cyan, magenta, yellow, and black.
- You can print at **1200 dpi** (Class). See page 3.9.
- In black & white mode your printer prints A4-sized paper at 20 ppm and letter-sized paper at 21 ppm (pages per minute). For color printing, A4/letter-sized paper prints at 5 ppm.
- In duplex printing, your printer prints A4/Letter sized paper at 10 IPM (images per minute) for black & white and 5 IPM for color.

Handle paper flexibly



- **Multi-purpose Tray** supports letterhead, envelopes, labels, transparencies, custom-sized materials, postcards, and heavy paper. A 100-sheet **Multi-purpose Tray** supports plain paper.
- The **Standard 250-sheet input tray** (Tray1) and **optional 500-sheet input tray** (Tray2) supports A4/letter-sized paper.

Create professional documents

- Print **Watermarks**. You can customize your documents with a word, such as "Confidential." See page 4.10.
- Print **Booklets**. This feature enables you to easily print the pages to create books. Once printed, all you have to do is to fold and staple the pages. See page 4.9.
- Print **Posters**. The text and pictures of each page of your document are magnified and printed across sheet of paper and taped together to form a poster. See page 4.7.

Save time and money

- You can print on both sides of the paper to save paper (**double-sided printing**). See page 4.2.
- You can print multiple pages on one single sheet of paper to save paper.
- You can use preprinted forms and letterhead on plain paper. See "Using Overlays" on page 4.13.
- This printer automatically **conserves electricity** by substantially reducing power consumption when not printing.
- This printer meets **Energy Star** guidelines for energy efficiency.

Expand the printer capacity

- This printer has 32 MB of memory which can be expanded to **160 MB**.
- You can install an optional 500-sheet tray in your printer. This tray reduces how often you have to add paper to the printer.
- A **Network interface** enables network printing. You can add the optional network interface card to CLP-500.

  CLP-500N comes with a built-in network interface, 10/100 Base TX. You can also use an optional wireless network interface.

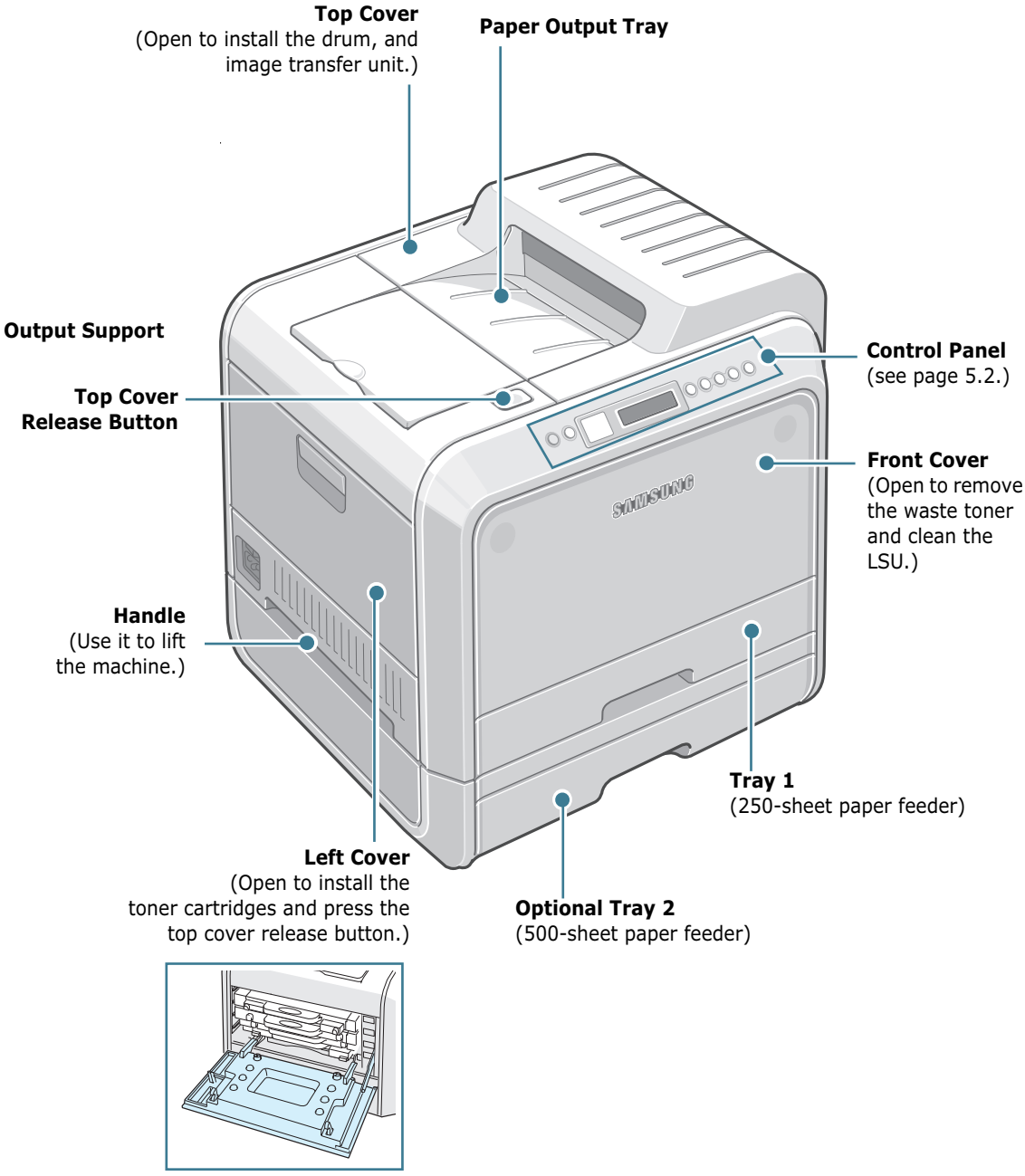
Print in various environments

- You can print in **Windows 95/98/Me/NT 4.0/2000/XP**.
- Your printer is compatible with a **Macintosh** and **Linux**.
- Your printer comes with both the **USB** and **Parallel** interface. The Parallel interface is available depending on your country.

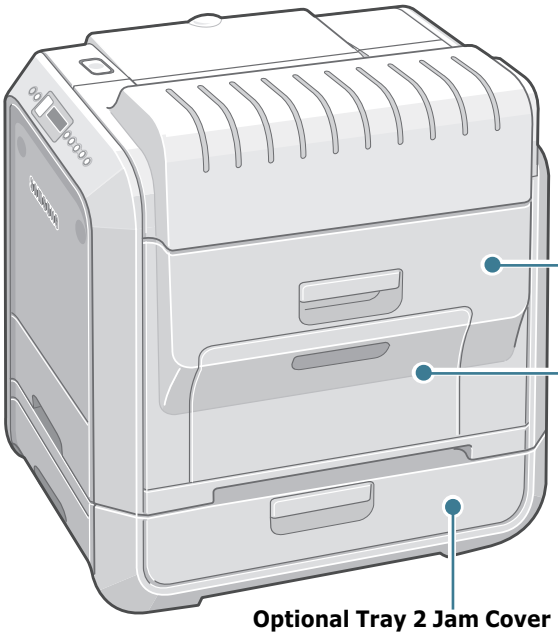
  You can also use a **Network interface**. CLP-500N comes with a built-in network interface, 10/100 Base TX. You can also use an optional wireless network interface, but, you need to add the optional network interface card to CLP-500.

Printer Components

Front View

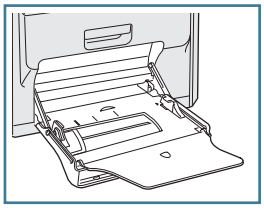

Top Cover
(Open to install the drum, and image transfer unit.)
Paper Output Tray
Output Support
Top Cover Release Button
Control Panel
(see page 5.2.)
Front Cover
(Open to remove the waste toner and clean the LSU.)
Handle
(Use it to lift the machine.)
Tray 1
(250-sheet paper feeder)
Left Cover
(Open to install the toner cartridges and press the top cover release button.)
Optional Tray 2
(500-sheet paper feeder)

Right View



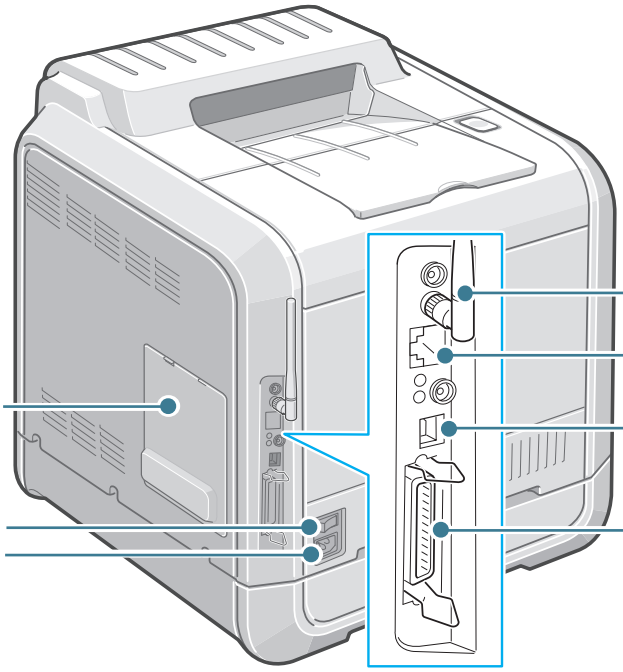
Right Cover
(Open to remove paper jams.)

Muti-purpose Tray
(Open to load special print materials.)



Optional Tray 2 Jam Cover
(Open to remove jams from Tray 2.)

Rear View



Wireless Network Antenna*

Network Port**

USB Port

Parallel Port***

Control Board Cover
(Open to install optional accessories.)

Power Switch

Power Receptacle

** This wireless network port is not available when you purchased the machine. You can install it using an option.*

*** The network port is provided at default for CLP-500N. CLP-500 users should install it using an optional network interface card. For details, see page D.6.*

**** The parallel port may not be available depending on your country.*

Changing the Display Language

To change the language that is displayed on the control panel, take the following steps:

1. In ready mode press the **Menu** button ( ) on the control panel until you see 'Setup' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until you see 'LCD Language' on the bottom line.
4. Press the **Enter** button ( ) to confirm the menu item.
5. Press the scroll button (or) to display the language you want to use.
6. Press the **Enter** button ( ) to save the selection.
7. Press the **On-Line/Continue** button ( ) to return to ready mode.

2 Using Print Materials

This chapter will help you understand the types of paper you can use with your printer and how to properly load paper in the different paper trays for the best print quality.

This chapter includes:

- **Choosing Paper and Other Materials**
- **Loading Paper**
- **Printing on Special Print Materials**

Choosing Paper and Other Materials

You can print on a variety of print materials, such as plain paper, envelopes, labels, transparencies and so on. See "Printing on Special Print Materials" on page 2.14. To get the best possible print quality, use only high-quality copier-grade paper.

When you choose print materials, consider the following:

- **Desired outcome**: The paper you choose should be appropriate for the project.
- **Size**: You can use any size paper that fits easily within the paper adjusters of the paper tray.
- **Weight** : Your printer supports paper weighs as follows:

  -16~24lbs (60~90g/m^2) bond for Tray 1 or optional Tray 2

  -16~43lbs (60~163g/m^2) bond for the Multi-purpose Tray

  -20~24lbs (75~90g/m^2) bond for duplex printing
- **Brightness**: Some papers are whiter than others and produce sharper, more vibrant images.
- **Surface smoothness**: The smoothness of the paper affects how crisp the printing looks on the paper.

CAUTION: Using a material that does not conform to the specifications listed on page E.6 can cause problems that may require service. This service is not covered by the warranty or service agreements.

Sizes and Capacities

Size	Input Source/Capacity*			
	Tray 1	Tray 2 (option)	Multi-purpose Tray	Manual Feed
Plain Paper	250	500	100	1
Envelopes	—	—	10	1
Labels**	—	—	10	1
Transparencies**	—	—	30	1
Card stock**	—	—	10	1

*Depending on paper thickness, the maximum capacity may be reduced.
** If you are experiencing excessive jamming, feed one sheet at a time through the Multi-purpose Tray.

Guidelines for Paper and Special Materials

When selecting or loading paper, envelopes, or other special materials, keep these guidelines in mind:

- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- Use cut-sheet paper only. You cannot use multi-part paper.
- Use only high-quality, copier grade paper for the best print quality.
- Do not use paper with irregularities, such as tabs or staples.
- Do not attempt to load any tray while printing and never overfill the tray. This could cause a paper jam.
- Avoid paper with embossed lettering, perforations, or a texture that is too smooth or too rough.
- Colored paper should be of the same high quality as white photocopy paper. The pigments must withstand the printer's fusing temperature of 180°C (356°F) for 0.1 seconds without deteriorating. Do not use paper with a colored coating that was added after the paper was produced.
- Preprinted forms must be printed with nonflammable, heat-resistant ink that does not melt, vaporize, or release hazardous emissions when subject to the printer's fusing temperature.
- Store paper in its ream wrapper until you are ready to use it. Place cartons on pallets or shelves, not on the floor.
- Do not place heavy objects on top of the paper, whether it is packaged or unpackaged.
- Keep paper away from moisture, direct sunlight or other conditions that can cause it to wrinkle or curl.

NOTE: Do not use carbonless paper and tracing paper. They could make smell of chemicals and damage your printer.

Loading Paper

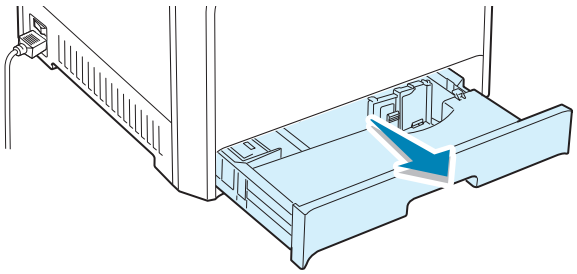
Proper paper loading helps prevent paper jams and ensure trouble-free printing. Do not remove the paper tray while a job is printing. Doing so may cause a paper jam. See "Sizes and Capacities" on page 2.2 for acceptable paper capacities for each tray.

Using Tray 1

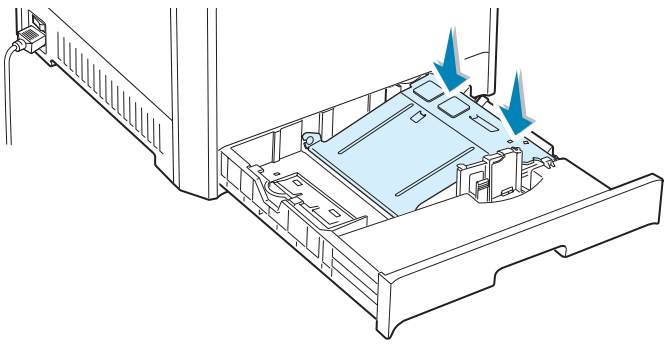
The tray, Tray 1, can hold a maximum of 250 sheets of plain A4 and letter-sized paper.

You can purchase an optional tray, Tray 2, and attach it below Tray 1, to load an additional 500 sheets of paper.

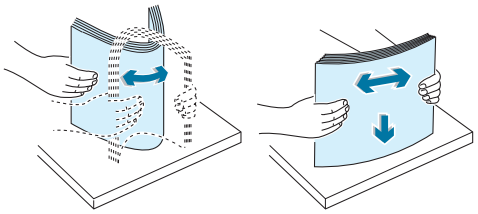
1 Pull the tray out of the printer.



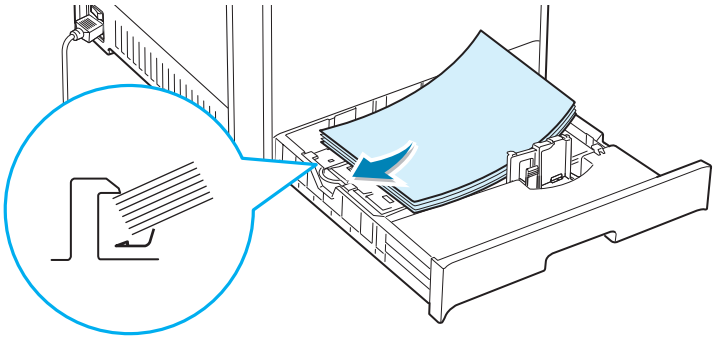
2 Push down on the metal plate until it locks into position.



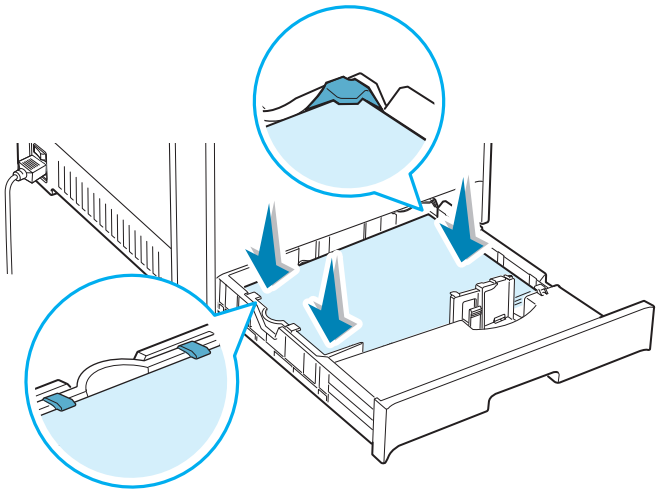
3 Flex the paper sheets back and forth to separate the pages, and then fan them while holding one edge. Tap the edge of the stack on a flat surface to even it up.



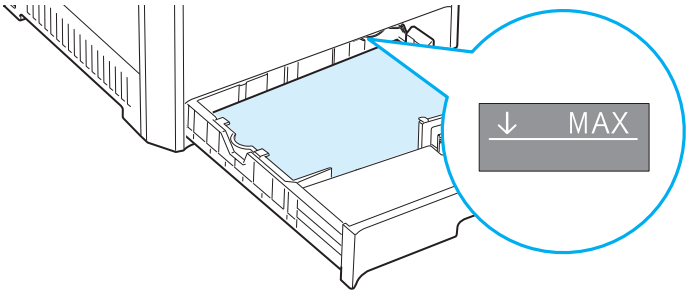
4 Load paper **with the print side facing up**.



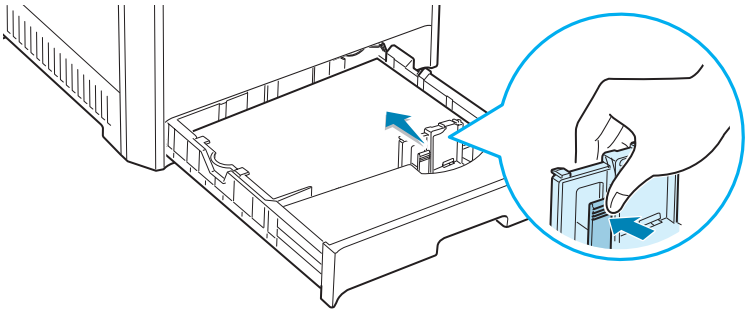
Make sure that all four corners are flat in the tray and under the following corner brackets.



5 Do not exceed the maximum stack height. Overfilling the tray may cause a paper jam.

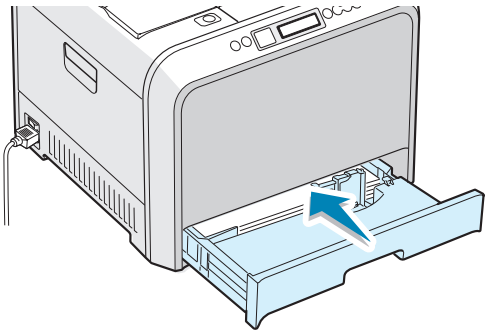


6 While pinching the paper guide as shown, move it toward the paper until it lightly touches the side of the stack. Do not press the guide too tightly against the edge of the paper; the guide may bend the paper.



NOTE: If you want to change the paper size in the tray, refer to page 2.7.

7 Slide the tray back into the printer.

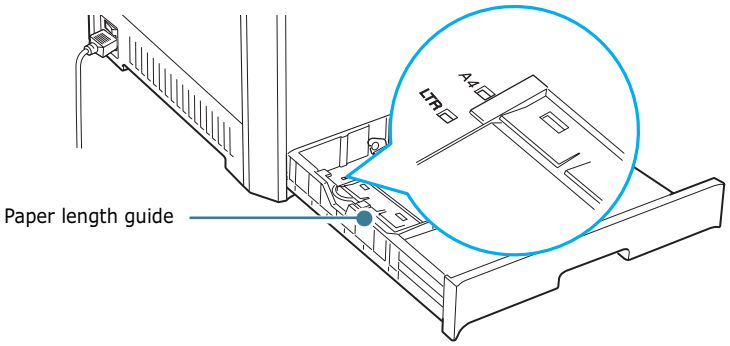


8 When you print a document, select the paper type, size and source in your software application. For details, see page 3.7.

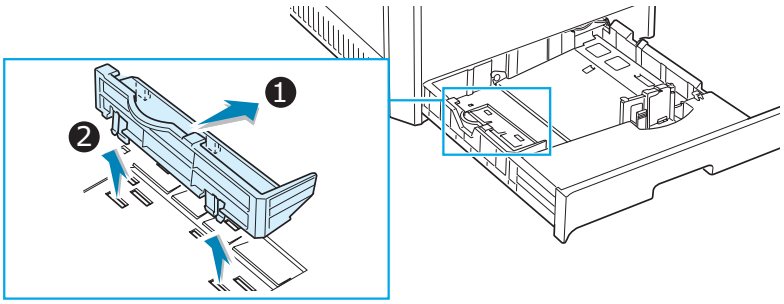
Changing the Paper Size in the Tray

The tray is preset to Letter or A4 size, depending on your country. To change the size to A4 or Letter, you must adjust the paper length guide properly.

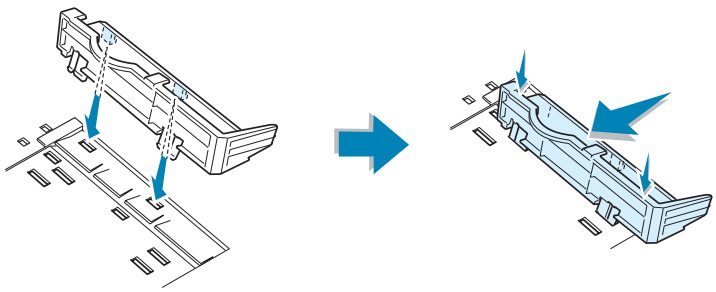
1 Lift the paper length guide and place it in the correct position for the paper size you are loading.



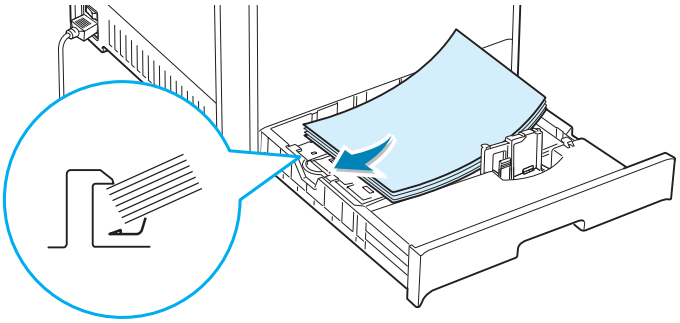
To remove the paper length guide, turn it slightly to your right to release the locks on the bottom of the guide, then pull it up.



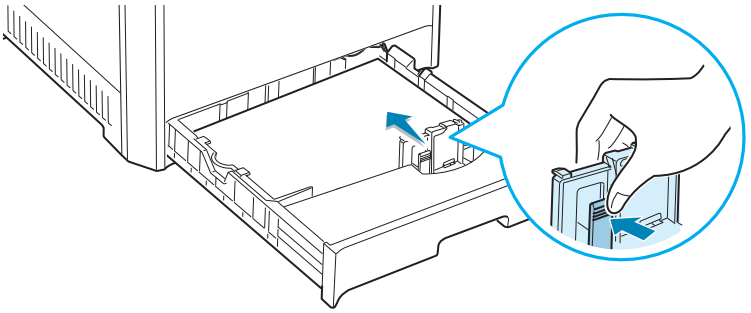
To place the paper length guide in the paper position you want, insert the locks on the bottom of the guide into the desired paper slot and push it all the way in.



2 Load paper with the **print side facing up**. For more information see steps 4 and 5 on page 2.5~2.6



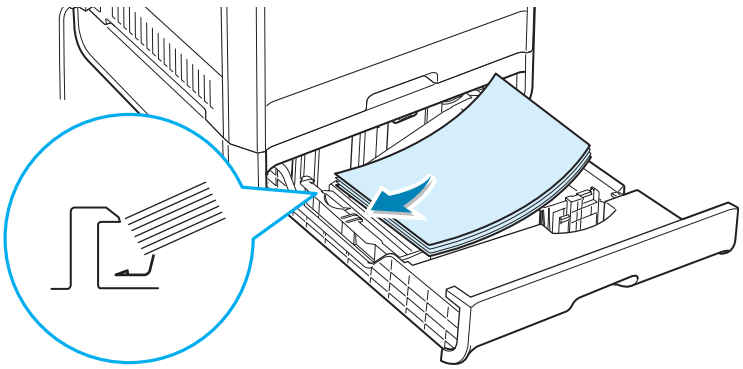
3 While pinching the paper guide as shown, move it toward the paper until it lightly touches the side of the stack. Do not too tightly press the guide to the edge of the paper; the guide may bend the paper.



Using the Optional Tray 2

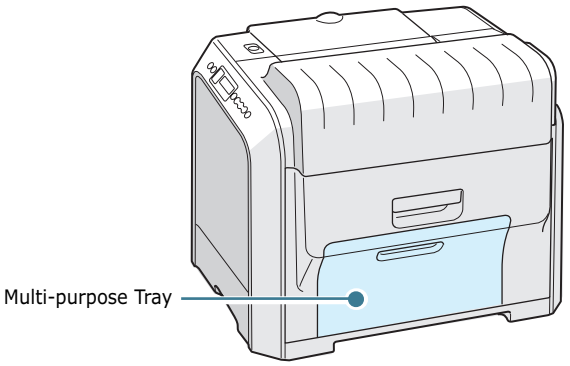
The optional tray, Tray 2, can hold a maximum of 500 sheets of plain paper.

To load paper in Tray 2, follow the instructions for loading paper on page 2.4.



Using the Multi-purpose Tray

The Multi-purpose Tray is located on the right side of your printer. It can be closed when you are not using it, making the printer more compact.

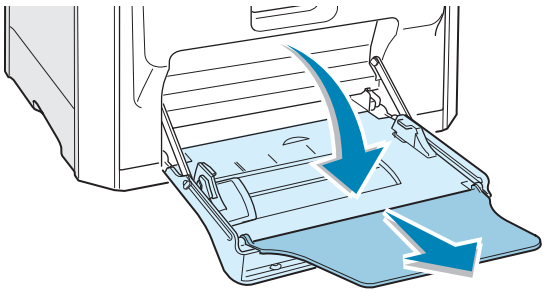


The Multi-purpose Tray can hold several sizes and types of material, such as transparencies, cards and envelopes. You may also want to use the Multi-purpose Tray for single page print jobs on letterhead, colored paper for use as separator sheets, or other special materials that you do not normally keep in the paper tray. You can load approximately 100 sheets of plain paper, 10 envelopes, 30 transparencies, 10 sheets of card stock or 10 labels at a time.

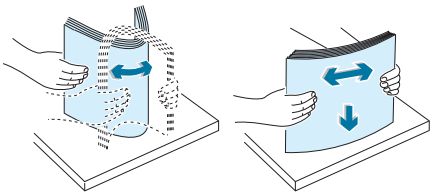
- Load only one size of print material at a time in the Multi-purpose Tray.
- To prevent paper jams, do not add paper when there is still paper in the Multi-purpose Tray. This also applies to other types of print materials.
- Print materials should be loaded face down with the top edge going into the Multi-purpose Tray first and be placed in the center of the tray.

To load print material in the Multi-purpose Tray:

1 Lower the Multi-purpose Tray and unfold the paper support extension as shown.

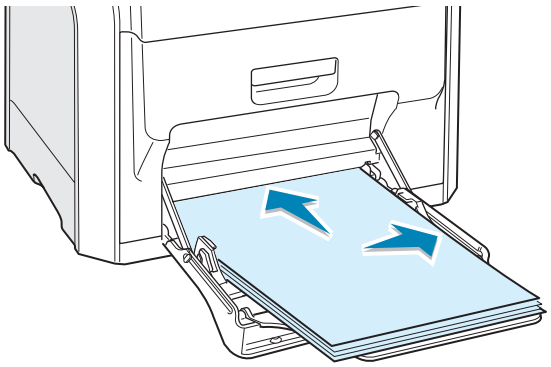


2 If you are using paper, flex or fan the edge of the paper stack to separate the pages before loading.

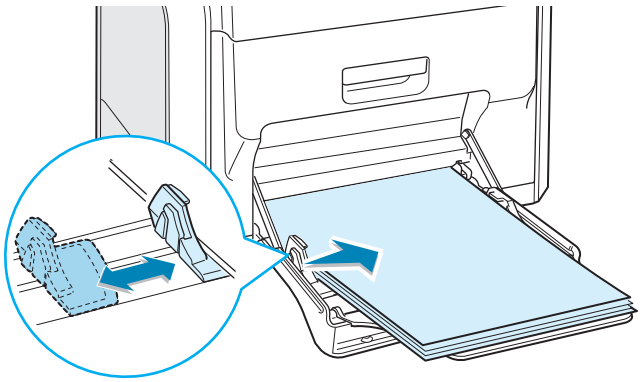


For transparencies, hold them by the edges and avoid touching the print side. Oils from your fingers can cause print quality problems.

3 Load the print material **with the print side facing down** and against the right edge of the tray.

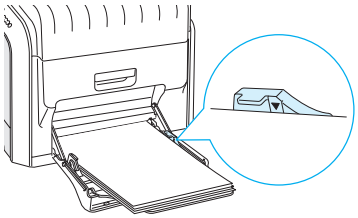


4 Pinch the paper width guide and slide it to the right to touch lightly against the edge of the material without bending it.

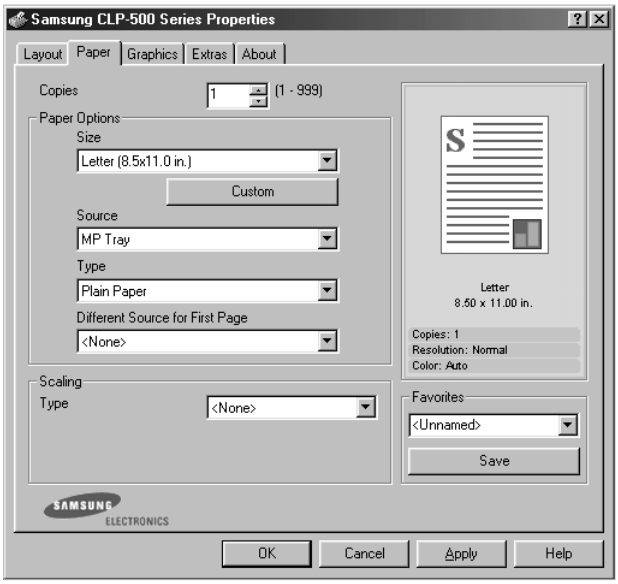


If you want to print on previously printed paper from the Multi-purpose Tray, the printed side should be facing up with the uncurled edge towards the printer. If you experience problems with the paper feeding, turn the paper around.

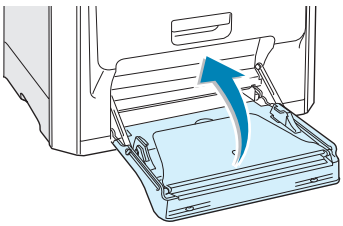
NOTE: Make sure that you have not loaded too much print material.
The print material buckles if you load a stack that is too deep or if you push it in too far.



5 When you print a document, set the paper source to **MP Tray** and select the correct paper type in the software application. For details, see page 3.7.



NOTE: After printing, fold up the extender back in place and close the Multi-purpose Tray.

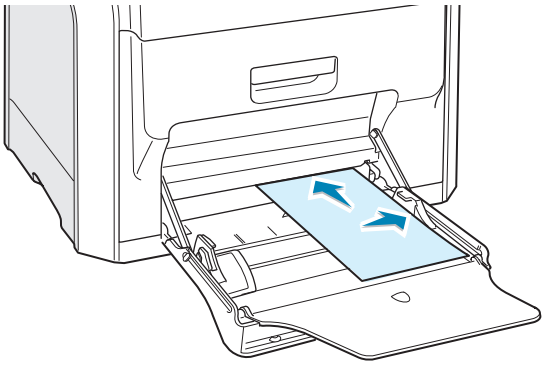


Using the Manual Feed

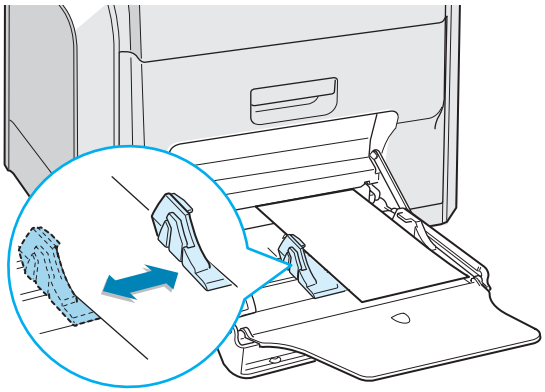
If you select **Manual** in the **Source** option when changing print settings, you can manually load a sheet of print material in Multi-purpose Tray. Manually loading paper can be helpful when you want to check the print quality after each page is printed.

This loading procedure is almost the same as the procedure for loading in the Multi-purpose Tray, except you load paper sheet-by-sheet in the Tray, send print data to print the first page, and press the **On-Line/Continue** button ( ) on the control panel to print each following page.

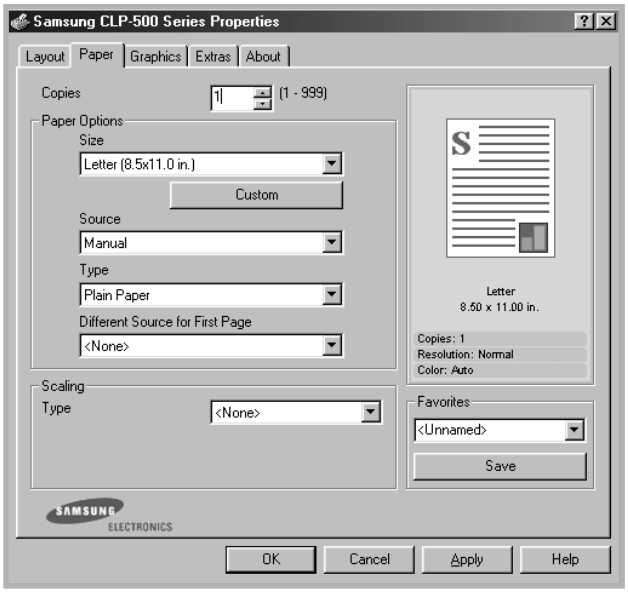
1 Load a sheet of print material **with the print side down** and against the right edge of the Multi-purpose Tray.



2 Pinch the paper width guide and slide it to the right to touch lightly against the edge of the paper without bending it.



3 When you print a document, you must select **Manual** for **Source** in the software application, and then select the correct paper size and type. For details, see page 3.7.



4 Print the document.

The display shows a message prompting you to load paper.

5 Press the **On-Line/Continue** button ( ).

The printer picks up the print material and prints. After one page is printed, the message appears again.

6 Insert the next sheet into the Multi-purpose Tray and press the **On-Line/Continue** button ( ).

Repeat this step for every page to be printed.

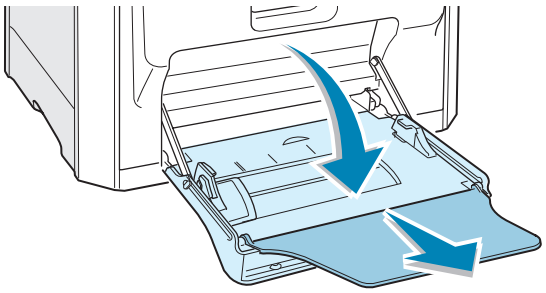
Printing on Special Print Materials

Printing on Envelopes

- Load envelopes into the Multi-purpose Tray only.
- Only use envelopes recommended for laser printers. Before loading envelopes in the Multi-purpose Tray, make sure that they are undamaged and are not stuck together.
- Do not feed stamped envelopes.
- Never use envelopes with clasps, snaps, windows, coated linings, or self-stick adhesives.

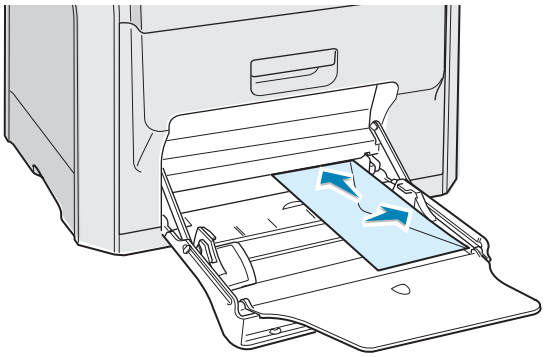
To print on envelopes:

1 Open the Multi-purpose Tray and unfold the paper support.

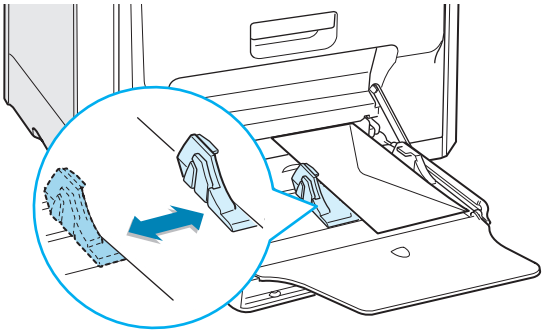


2 Flex or fan the edge of the envelope stack to separate them before loading.

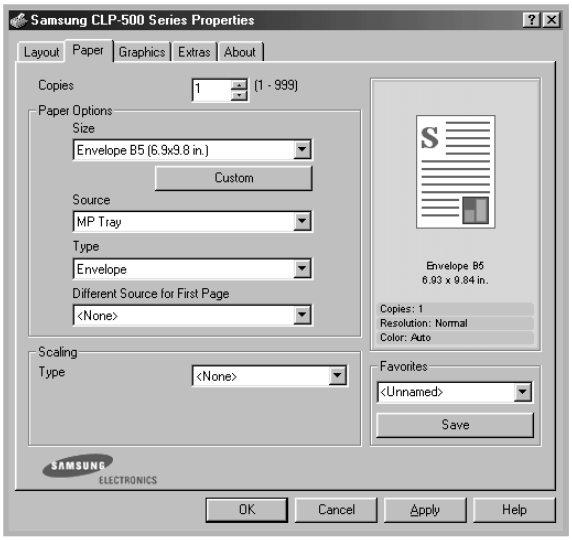
3 Load the envelopes into the Multi-purpose Tray **with the flap side up**. The end of the envelope with the stamp area enters the tray last.



4 Pinch the paper width guide and slide it to the right to touch lightly against the edge of the stack without bending it.



5 When you print, configure the paper source to **MP Tray**, the paper type to **Envelope** and the paper size in the software application. For details, see page 3.7.

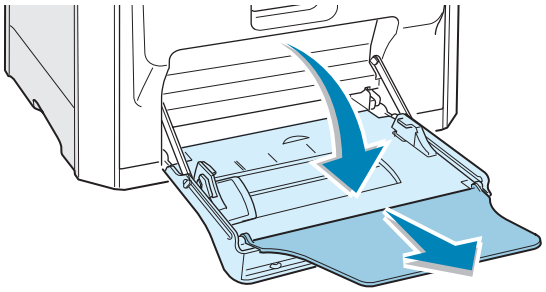


Printing on Labels

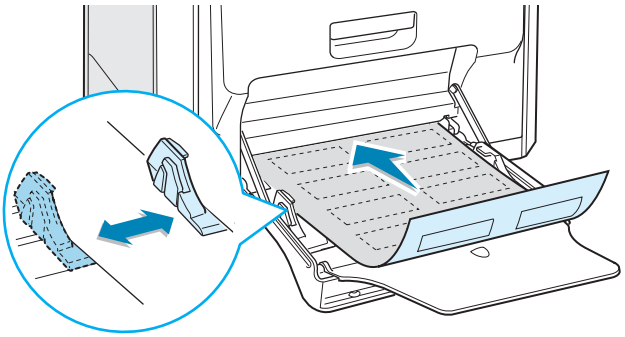
- Only use labels recommended for laser printers.
- Verify that the labels' adhesive material can tolerate a fusing temperature of 180°C (356°F) for 0.1 seconds.
- Make sure that there is no exposed adhesive material between the labels. Exposed areas can cause labels to peel off during printing, which can cause paper jams. Exposed adhesive can also cause damage to the printer components.
- Never print on the same sheet of labels more than once or print on a partial sheet of labels.
- Do not use labels that are separating from the backing sheet or are wrinkled or damaged in any way.
- To prevent labels from sticking together, do not let the printed label sheets stack up as they are printed out.

To print on labels:

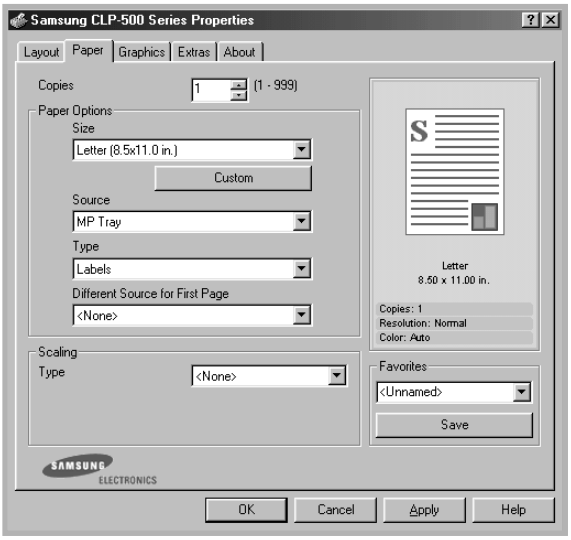
1 Open the Multi-purpose Tray and unfold the paper support.



2 Load labels only in the Multi-purpose Tray **with the print side down** and the top, short edge in first. Adjust the guide to fit the width of the labels.



3 When you print, configure the paper source to **MP Tray**, the paper type to **Labels** and the size in the software application. For details, see page 3.7.

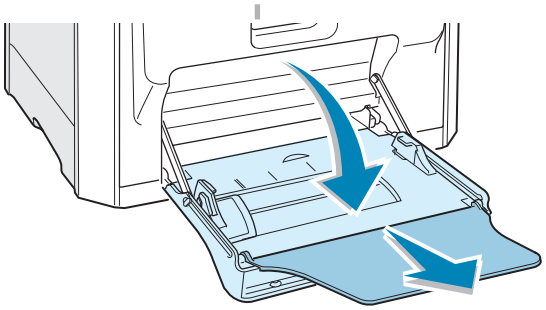


Printing on Transparencies

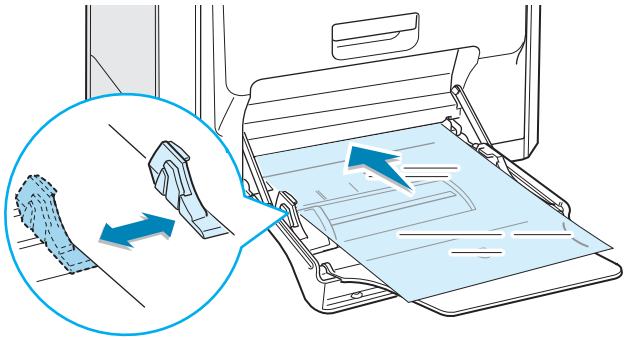
- When you print a color document, do not use transparencies attached to plain paper. This may cause print quality problems.
- Only use transparencies recommended for use in laser printers.
- Ensure that transparencies do not have torn edges and are not wrinkled or curled.
- Hold the transparencies by the edges and avoid touching the print side. Oils from your fingers can cause print quality problems.
- Be careful not to leave fingerprints on or scratch the print side.

To print on transparencies:

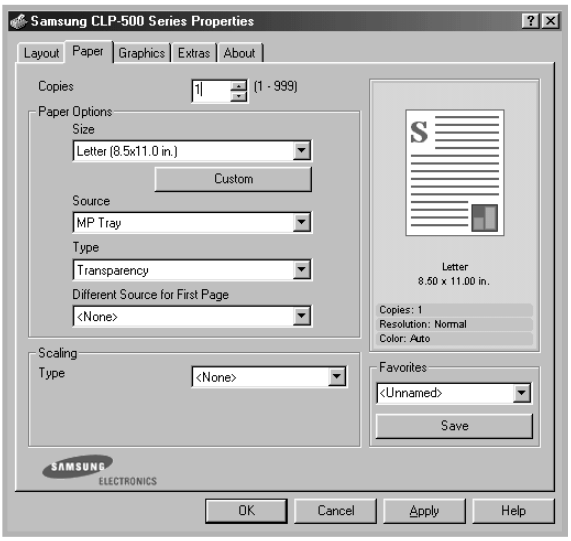
1 Open Multi-purpose Tray and unfold the paper support.



2 Load transparencies only in the Multi-purpose Tray **with the print side down**, and **the top with the adhesive strip entering the printer first**. Adjust the guide to fit the width of the transparencies.



3 When you print, configure the paper source to **MP Tray**, the paper type to **Transparency**, and the paper size in the software application. For details, see page 3.7.



NOTES:

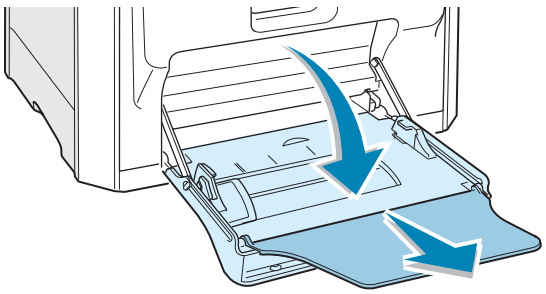
- To prevent transparencies from sticking together, do not let the printed sheets stack up as they are printed out.
- Place transparencies on a flat surface after removing them from the printer.

Printing on Preprinted Paper

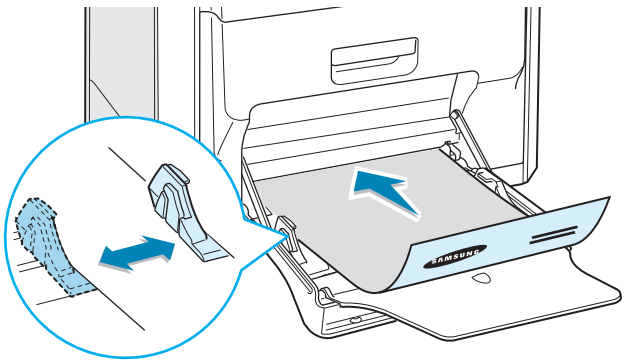
- Preprinted paper is paper that has some type of printing placed on it before it is sent through the printer (paper that has a preprinted logo at the top of the page, for example).
- Letterhead must be printed with heat-resistant ink that will not melt, vaporize, or release hazardous emissions when subjected to the printer's fusing temperature of 180°C (356°F) for 0.1 seconds.
- Ink on letterhead must be non-flammable and should not adversely affect any printer rollers.
- Forms and letterhead should be sealed in moisture-proof wrapping to prevent changes during storage.
- Before you load preprinted paper, such as forms and letterhead, verify that the ink on the paper is dry. During the fusing process, wet ink can come off of preprinted paper, reducing the print quality.

To print on preprinted paper:

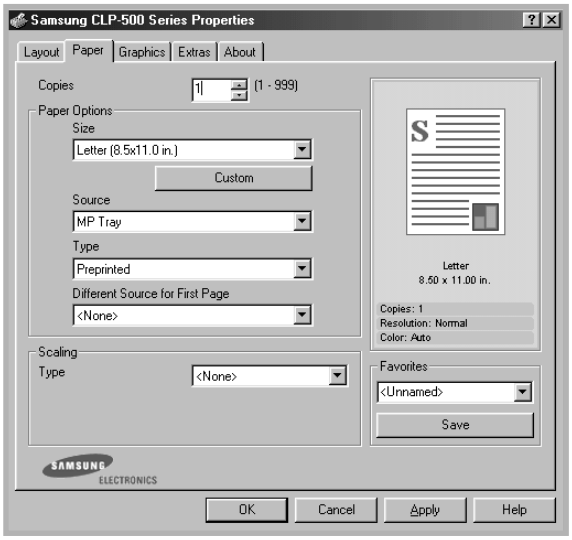
1 Open the Multi-purpose Tray and unfold the paper support.



2 Load letterhead only in the Multi-purpose Tray **with the print side down**. Adjust the guide to fit the width of the paper stack.



3 When you print, configure the paper source to **MP Tray**, the paper type to **Preprinted**, and the paper size in the software application. For details, see page 3.7.

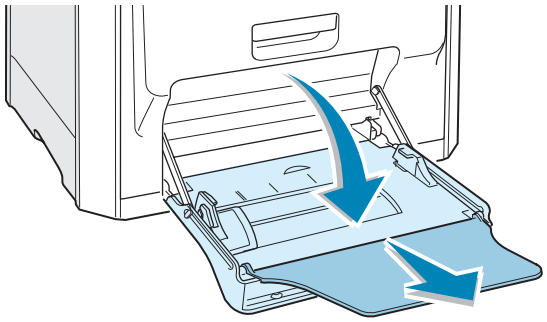


Printing on Card Stock or Custom-sized Materials

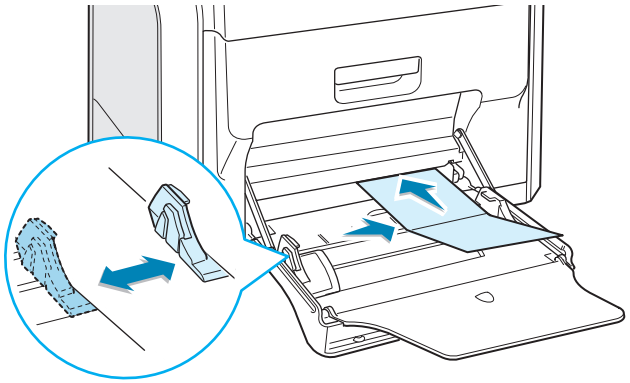
- Postcards, 3.5in. by 5.5in. (index) cards and other custom-sized materials can be printed with your printer. The minimum size is 90mm by 140mm (3.5in. by 5.5in.) and the maximum size is 216mm by 356mm (8.5in. by 14in.).
- Always insert the short edge into the Multi-purpose Tray first. If you want to print in landscape mode, make this selection using your software. Inserting paper long edge first may cause a paper jam.
- Do not load more than 10 cards into the Multi-purpose Tray at a time.
- Do not print on material smaller than 90mm (3.5in.) wide or 140mm (5.5in.) long.
- Set margins at least 4.3mm away from the edges of the material in the software application.

To print on card stock:

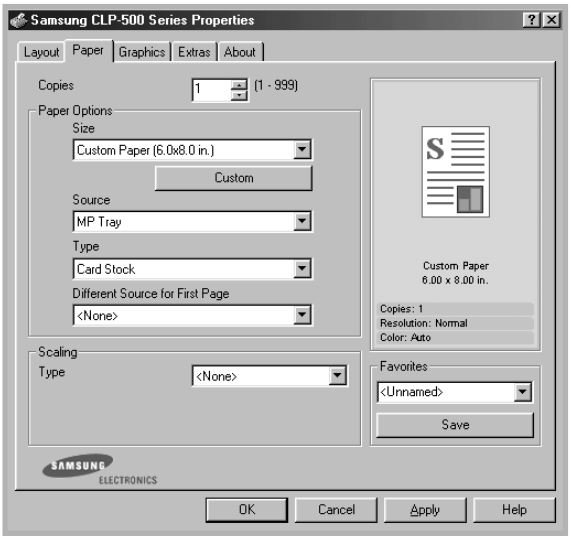
1 Open the Multi-purpose Tray and unfold the paper support.



2 Load print material only in the Multi-purpose Tray **with the print side down** and the **short edge first**. Slide the guide until it lightly touches the stack without bending it.



3 When you print, configure the paper source to **MP Tray**, the paper type and size in the software application. For details, see page 3.7.



If the size of your print material is not listed in the **Size** box in the **Paper** tab, click the **Custom** button and set the size manually. See page 3.7.

3 PRINTING TASKS

This chapter explains the printing options and common printing tasks.

This chapter includes:

- **Printer Driver Features**
- **Printing a Document**
- **Printer Settings**

Printer Driver Features

The your printer drivers will support the following standard features:

- Paper source selection
- Paper size, orientation and media type
- number of copies

Table below lists a general overview of features supported by the your printer drivers.

Feature	SPL			
	Win9x/Me	Win2000/XP	NT4.0	Macintosh
Color mode	Y	Y	Y	Y
Print quality option	Y	Y	Y	N
Poster printing	Y	Y	Y	N
Double-sided printing	Y	Y	Y	N
Booklet printing	Y	Y	Y	N
Multiple pages per sheet (N-up)	Y	Y	Y	Y
Fit to page printing	Y	Y	Y	N
Scale printing	Y	Y	Y	Y
Different source for first page	Y	Y	Y	N
Watermark	Y	Y	Y	Y
Overlay	Y	Y	Y	N
TrueType fonts option	Y	Y	Y	N

Printing a Document

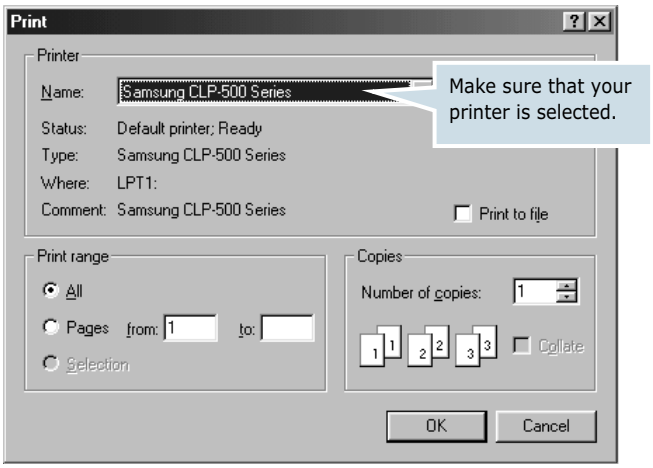
The following procedure describes the general steps required for printing from various Windows applications. The exact steps for printing a document may vary depending on the application program you are using. Refer to the User's Guide of your software application for the exact printing procedure.

NOTE: For detailed information about printing from a Macintosh computer or a Linux system, see Appendix A and Appendix B.

1 Open the document you want to print.

2 Select **Print** from the **File** menu. The Print window opens. It may look slightly different depending on your application.

You can select the basic print settings within the Print window. These settings include the number of copies and the print range.



▲ Windows 98

3 To take advantage of the printer features provided by your printer, click **Properties** in the application's print window. For details, see "Printer Settings" on page 3.5

If you see a **Setup**, **Printer** or **Options** button in your Print window, click it instead. Then click **Properties** on the next screen.

4 Click **OK** to close the Properties window.

5 To start the print job, click **OK** in the Print window.

Canceling a Print Job

A print job can be stopped from a program, from a print queue, or from the **Cancel** button (⊗) on the printer.

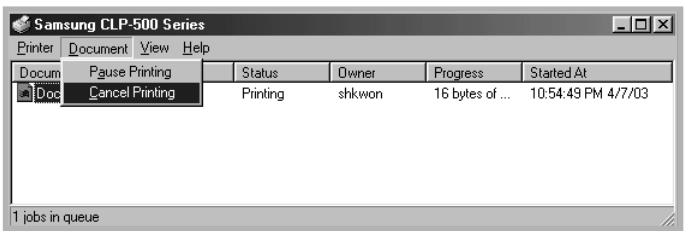
To stop a print job from the control panel:

- If the print job is already printing, press the **Cancel** button (⊗). The printer finishes printing the pages that are already moving through the printer and deletes the remainder of the print job.
- Pressing the **Cancel** button (⊗) cancels only the current job in the printer. If more than one print job is in the printer memory, you must press the **Cancel** button once for each job after the job starts printing.

To stop a print job from the Printers folder:

If the print job is waiting in a print queue or print spooler, such as the Printer group in Windows, delete the job as follows:

1. From the Windows **Start** menu, select **Settings**.
2. Select **Printers** to open the Printers window, and double-click the **Samsung CLP-500 Series** icon.
3. From the **Document** menu, select **Cancel Printing** (Windows 9x/Me) or **Cancel** (Windows NT 4.0/2000/XP).



▲ Windows 98

Printer Settings

You can use the Samsung CLP-500 Series Properties window, which allows you to access all of the information you need when using your printer. When the printer properties are displayed, you can review and change whatever settings are needed for your print job.

Your printer's Properties window consists of 5 tabs: **Layout**, **Paper**, **Graphics**, **Extras** and **About**.

If you access the printer properties through the **Printers** folder, you can view more Windows-based tabs; refer to your Windows User's Guide.

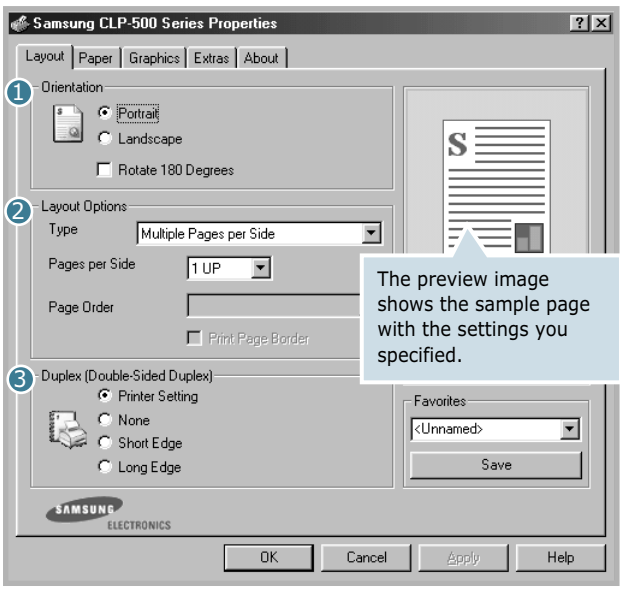
The printer's Properties window may differ, depending on your operating system. This User's Guide shows the Properties window on Windows 98.

Notes:

- Most Windows applications will override the settings you specify in the printer driver. Change all of the print settings available in the software application first, and change any remaining settings using the printer driver.
- The settings you change remain in effect only while you are using the current program. To make your changes permanent, make them in the **Printers** folder. Follow this procedure:
  1. Click the Windows **Start** menu.
  2. For Windows 95/98/Me/NT 4.0/2000, select **Settings** and then **Printers**.
     For Windows XP, select **Printers and Faxes**.
  3. Select the **Samsung CLP-500 Series** printer.
  4. Click the right mouse button on the printer icon and:
     - In Windows 95/98/Me, select **Properties**.
     - In Windows 2000/XP, select **Printing Preferences**.
     - In Windows NT 4.0, select **Document Default**.
  5. Change the settings on each tab, and click **OK**.

Layout tab

The **Layout** tab provides options for you to adjust how the document appears on the printed page. The **Layout Options** includes **Multiple Pages per Side**, **Booklet Printing**, and **Poster**. You can also use **Duplex(Double-sided Duplex)** in this tab. See page 3.3 for more information on accessing your software application.

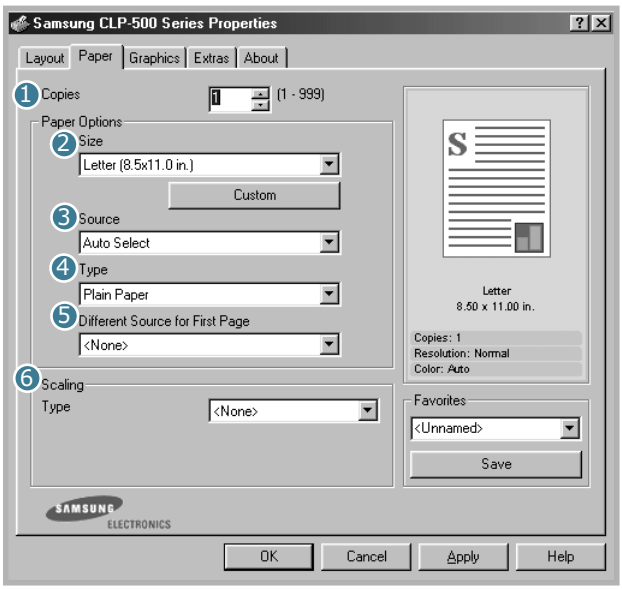


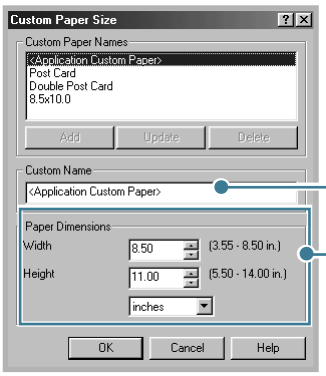
Property	Description
❶ **Orientation**	**Orientation** allows you to select the direction in which information is printed on a page. • **Portait** prints across the width of the page, letter style. • **Landscape** prints across the length of the page, spreadsheet style. If you want to turn the page upside down, select **Rotate 180 Degrees**. ▲ portrait ▲ Landscape
❷ **Layout Options**	**Layout Options** allows you to select advanced printing options. For details , see Chapter 4, "Advanced Printing."
❸ **Duplex(Double -Sided Duplex)**	**Duplex(Double-Sided Duplex)** allows you to automatically print two-sided documents. If you use the printer driver's default setting, select **Printer Setting**. For details, see page 4.3.

Paper tab

You can use the following options for the basic paper handling. See page 3.3 for more information about accessing your software application.

Click the **Paper** tab to display the Paper properties.



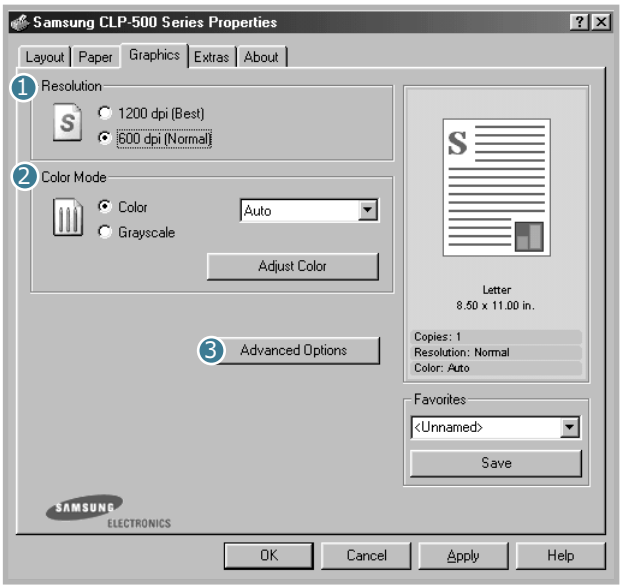
Property	Description
❶ **Copies**	**Copies** allows you to choose the number of copies to be printed. You can enter up to 999.
❷ **Size**	**Size** allows you to choose the size of the paper loaded in the tray. If the required size is not listed in the **Size** box, click **Custom**. When the **Custom Paper Size** window appears, set the paper size and click **OK**. The setting appears on the list so that you can select it. 

Property	Description
❸ **Source**	Make sure that **Source** is set to the corresponding paper tray. Use the **Manual** source when printing to special material. You have to load one sheet at a time into the Multi-purpose Tray. See page 2.9. If the paper source is set to **Auto Select**, the printer automatically picks up print material in the following order: Multi-purpose Tray, Tray1, Optional Tray2.
❹ **Type**	Make sure that **Type** is set to **Plain Paper**. If you load a different type of print material, select the corresponding paper type. For more information on print material, refer to Chapter 2, "Using Print Materials." If you use cotton paper, set the paper type to **Thick** for the best printing. To use recycled paper, which weighs from 20lb to 24lb (75~90g/m^2), or colored paper, select **Colored**.
❺ **Different Source for First Page**	This property allows you to print the first page using a different paper type from the rest of the document. You can select the paper source for the first page. For example, load thick stock for the first page into the Multi-purpose Tray, and plain paper into Tray1. Then, select **Tray1** in the **Source** option and **MP Tray** in the **Different Source for First Page** option.
❻ **Scaling**	**Scaling** allows you to automatically or manually scale your printer job on a page. You can choose from **None**, **Scale Printing**, **Fit to Page**. For details, see page 4.4 and page 4.5.

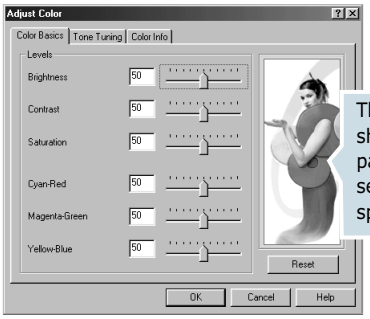
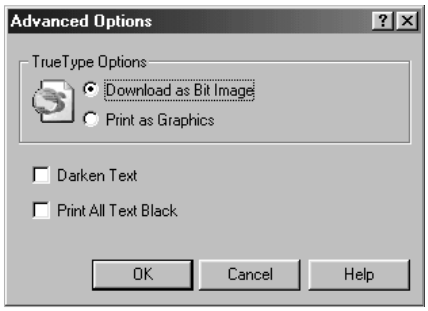
Graphics tab

Use the following graphic options to adjust the print quality for your specific printing needs. See page 3.3 for more information about accessing your software application.

Click the **Graphics** tab to display the Graphics properties.



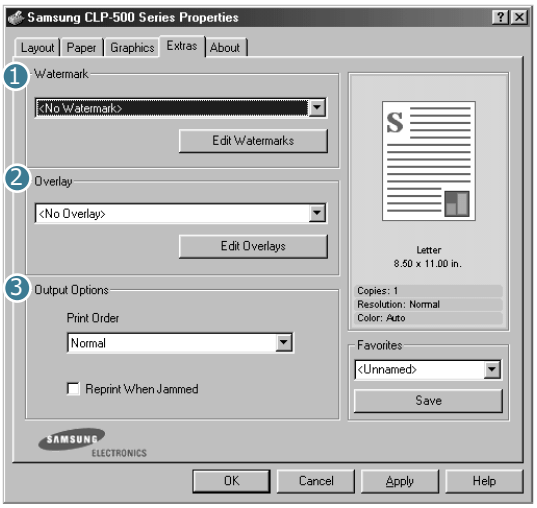
Property	Description
❶ **Resolution**	You can select the printing resolution by choosing from **1200 dpi (Best)**, **600 dpi (Normal)**. The higher the setting, the sharper the printed characters and graphics. The higher settings may increase the time it takes to print a document.
❷ **Color Mode**	You can set the color options. Setting to **Color** typically produces the best possible print quality for color documents. If you want to print a color document in grayscale, select **Grayscale**. If you select **Color**, you can select additional options, which allows you to use optional color and halftone settings for different objects: **Auto**, **Graphic**, **Photo** and **Text**. Using the **Auto** setting adjusts the color automatically for different types of documents.

Property	Description
❷ **Color Mode** *(Continued)*	If you click **Adjust Color**, you can change the appearance of the document's images.  The preview image shows the sample page with the settings you specified. • **Color Basics**: You can adjust the appearance of the images by changing the settings in the **Levels** option. • **Tone Tuning**: You can adjust the tonal range of images by changing the **Tone Curve** option. • **Color Info**: This tab contains information about the driver's color conversion system.
❸ **Advanced Options**	You can make advanced settings by clicking the **Advanced Options** button.  **TrueType Options** This option is only avaliable when you use Windows 9x. This option determines what the driver tells the printer about how to image the text in your document. Select the appropriate setting according to the status of your document. • **Download as Bit Image:** When this option is selected, the driver will download the font data as bitmap images. Documents with complicated fonts, such as Korean or Chinese, or various types of fonts will print faster in this setting.

Property	Description
❸ **Advanced Options** *(Continued)*	• **Print as Graphics:** When this option is selected, the driver will download any fonts as graphics. When printing documents with high graphic content and relatively few TrueType fonts, printing performance (speed) may be enhanced in this setting. • **Darken Text**: This option is cheked, all text in your document prints darker than normal. • **Print All Text Black**: This option is checked, all text in your document prints solid in black, regardless of the color it appears on the screen. When it is not checked, colored text prints in shades of gray.

Extras tab

See page 3.3 for more information about accessing your software application. Click the **Extras** tab to access the following features:



Option	Description
❶ **Watermark**	You can create a background image of text to print on each page of your document. See "Using Watermarks" on page 4.10.
❷ **Overlay**	Overlays are often used to take the place of preprinted forms and letterhead paper. See "Using Overlays" on page 4.13.
❸ **Output Options**	**Print Order:** You can set the sequence for the pages to print. Select the print order from the drop-down list. • **Normal**: Your printer prints all pages from the first page to the last page. • **Reverse All Pages**: Your printer prints all pages from the last page to the first page. • **Print Odd Pages**: Your printer prints only the odd pages of the document. • **Print Even Pages**: Your printer prints only the even pages of the document. **Reprint When Jammed:** When this option is checked, the printer keeps the image for a printed page until the printer signals that the page has successfully exited the printer. When a paper jam occurs, the printer reprints the last page after you clear the jam.

About tab

Use the **About** tab to display the copyright notice and the version number of the driver. If you have an Internet browser, you can connect to the Internet by clicking the website icon. See page 3.3 for more information about accessing your software application.

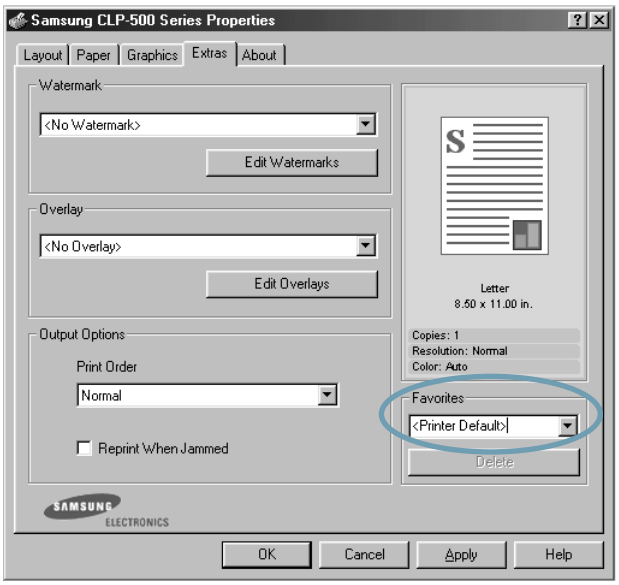
Using a Favorite Setting

The **Favorites** option, which is visible on each tab, allows you to save the current properties settings for future use.

To save a Favorites item:

1 Change the settings as needed on each tab.

2 Enter a name for the item in the **Favorites** input box.



3 Click **Save**.

When you save **Favorites**, all current driver settings are saved.

To use a saved setting, select the item from the **Favorites** drop down list.

The printer is now set to print according to the Favorites setting you selected.

To delete a Favorites item, select it from the list and click **Delete**.

You can also restore the printer driver's default settings by selecting **<Printer Default>** from the list.

Using Help

Your printer has a help screen that can be activated using the **Help** button in the printer's Properties window. The help screen gives you detailed information about the printer features provided by the printer driver.

You can also click ? in the upper right hand corner, and then click on any setting.

4 ADVANCED PRINTING

This chapter explains the printing options and advanced printing tasks.

This chapter includes:

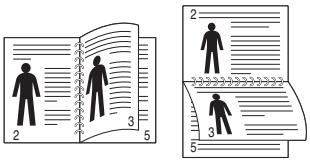
- **Printing on Both Sides of the Paper**
- **Scaling Your Document**
- **Fitting Your Document to a Selected Paper Size**
- **Printing Multiple Pages on One Sheet of the Paper**
- **Printing Posters**
- **Printing Booklets**
- **Using Watermarks**
- **Using Overlays**

Printing on Both Sides of the Paper

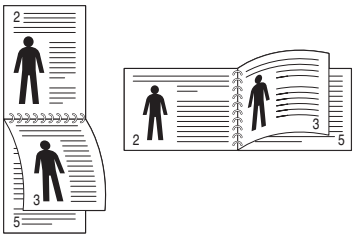
You can print on both sides of the paper automatically. Before printing, decide how you want your documents oriented.

The options are:

- **Long Edge**, which is the conventional layout used in book binding, or portrait.
- **Short Edge**, which is the type often used with calendars, or landscape.



▲ Long Edge



▲ Short Edge

NOTES:

- Do not print on both sides of labels, transparencies, envelopes, or thick paper. Paper jamming and damage to the printer may result.
- To use double-sided printing, you can use only the following paper sizes: A4, Letter, Legal and Folio that weigh 20~24lbs (75~90g/m^2).

There are two ways to enable or disable double-sided printing:

Using the Control Panel Menu

Select **Duplex** in the **Layout** menu. Set the **Duplex Margin** item in the same menu, if necessary. See page 5.7 for more details.

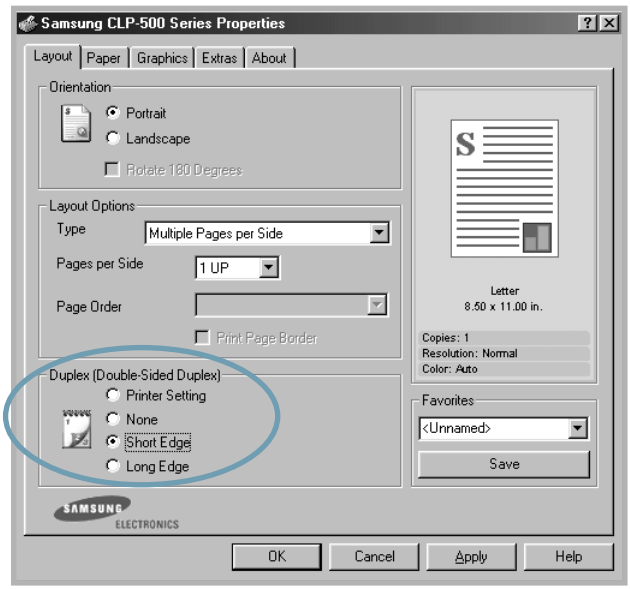
For further details about using the control panel menu, see page 5.5.

From the software application

1 When you change the print settings from your software application, access the printer's Properties. See page 3.3.

2 From the **Layout** tab, select the paper orientation.

3 From the **Duplex(Double-Sided Duplex)** section, select either Printer Setting, None, Short Edge, or Long Edge.

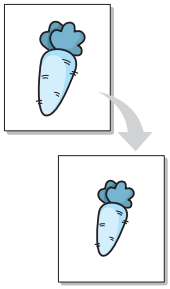


4 Click the **Paper** tab and select the paper source, size and type.

5 Click **OK** and print the document.

NOTE: The settings in the software application override those on the control panel.

Scaling Your Document



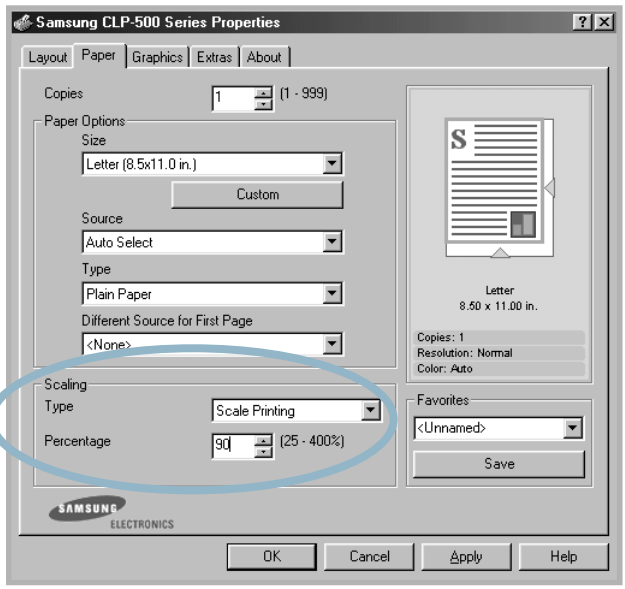
You can scale your print job on a page.

1. When you change the print settings from your software application, access the printer Properties. See page 3.3.

2. From the **Paper** tab, select **Scale Printing** from the **Type** drop-down list.

3. Enter the scaling rate in the **Percentage** input box.

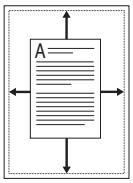
   You can also click the ▲ or ▼ button.



4. Select the paper source, size and type in **Paper Options**.

5. Click **OK** and print the document.

Fitting Your Document to a Selected Paper Size

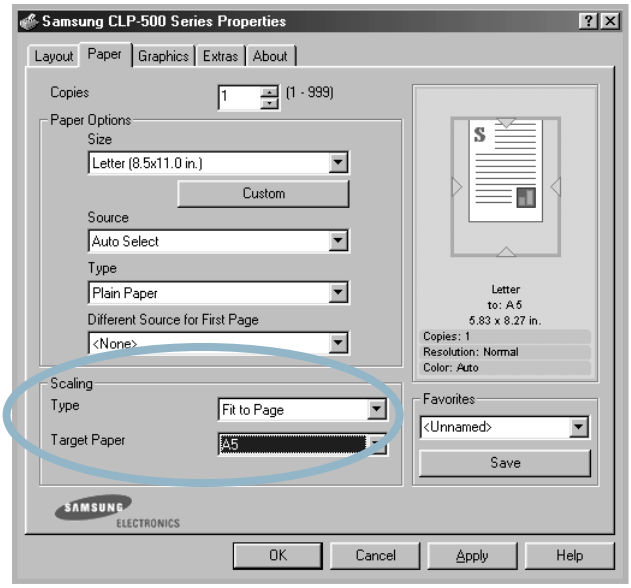


This printer feature allows you to scale your print job to any paper size regardless of the digital document size. This can be useful when you want to check the fine details on a small document.

1. When you change the print settings from your software application, access the printer Properties. See page 3.3.

2. From the **Paper** tab, select **Fit to Page** from the **Type** drop-down list.

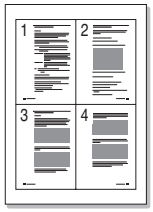
3. Select the correct size from the **Target Paper** drop-down list.



4. Select the paper source, size and type in **Paper Options**.

5. Click **OK** and print the document.

Printing Multiple Pages on One Sheet of the Paper

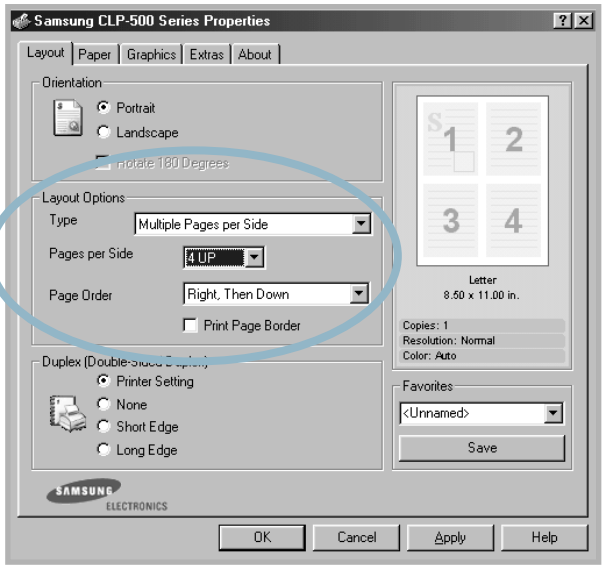


You can select the number of pages to print on a single sheet of paper. To print more than one page per sheet, the pages are smaller and arranged in the order you specify on the sheet. You can print up to 16 pages on one sheet.

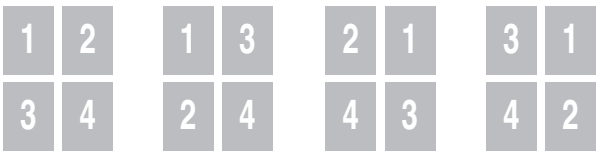
1. To change the print settings from your software application, access the printer Properties. See page 3.3.

2. From the **Layout** tab, choose **Multiple Pages per Side** from the **Type** drop-down list.

3. Select the number of pages you want to print per sheet (1, 2, 4, 9 or 16) from the **Pages per Side** drop-down list.



4. Select the page order from the **Page Order** drop-down list, if necessary.



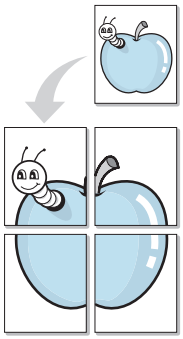
The **Page Order** drop down list is enabled only if the number of pages per side is 4, 9 or 16.

Check **Print Page Border** to print a border around each page on the sheet. **Print Page Border** is enabled only if the number of pages per side is 2, 4, 9, or 16.

5 Click the **Paper** tab and select the paper source, size and type.

6 Click **OK** and print the document.

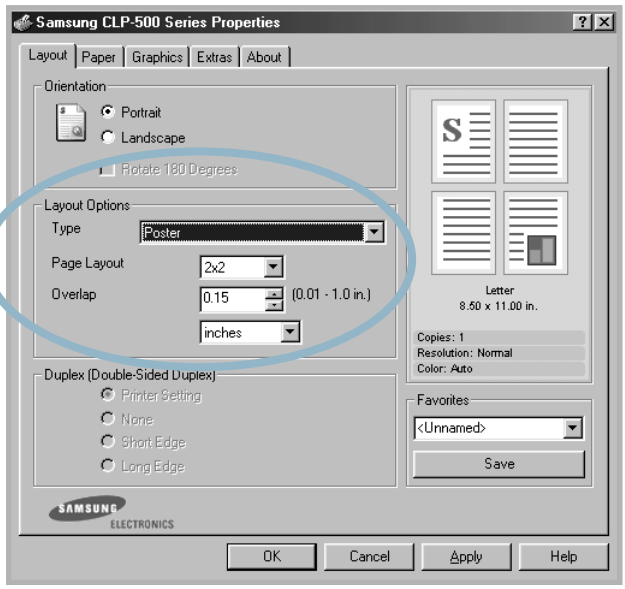
Printing Posters



This feature allows you to print a single-page document onto 4, 9 or 16 sheets of paper, for the purpose of pasting the sheets together to form one poster-sized document.

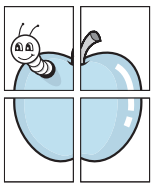
1 When you change the print settings from your software application, access the printer Properties. See page 3.3.

2 From the **Layout** tab, select **Poster** from the **Type** drop-down list.

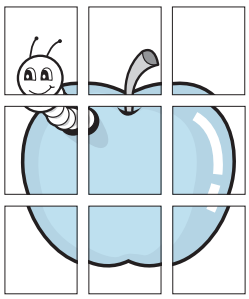


3 Configure the poster option:

You can select the page layout from 2x2, 3x3 or 4x4. If you select 2x2, the image is automatically stretched to cover 4 physical pages.

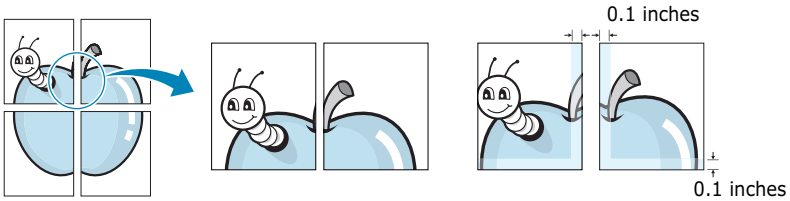


▲ 2x2



▲ 3x3

Specify an overlap in millimeters or inches to make it easier to pasting the sheets together.



4 Click the **Paper** tab and select the paper source, size and type.

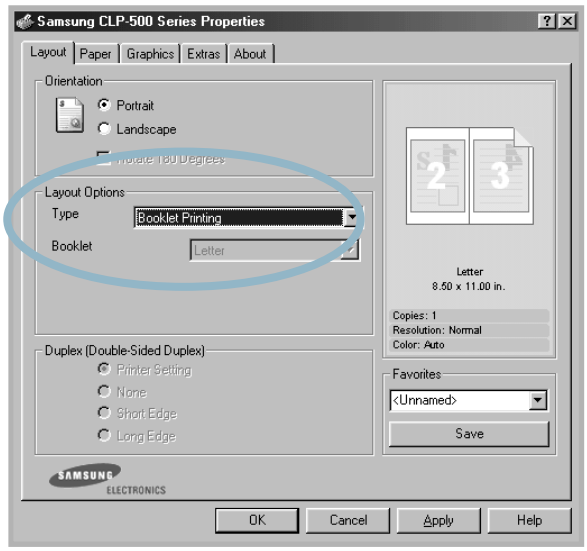
5 Click **OK** and print the document. You can complete the poster by pasting the sheets together.

Printing Booklets

The Booklet printing feature allows you to print your document on both sides of the paper and arranges the pages so that the paper can be folded in half after printing to produce a booklet.

1 When you change the print settings from your software application, access the printer Properties. See page 3.3.

2 From the **Layout** tab, choose **Booklet Printing** from the **Type** drop-down list.

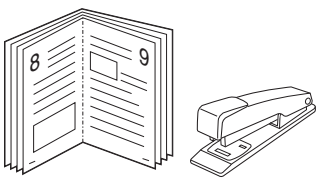


NOTE: The booklet printing option is available when A4, Letter, Legal or Folio size is selected in the **Size** option on the **Paper** tab.

3 Click the **Paper** tab, and select the paper source, size and type.

4 Click **OK** and print the document.

5 After printing, fold and staple the pages.



Using Watermarks

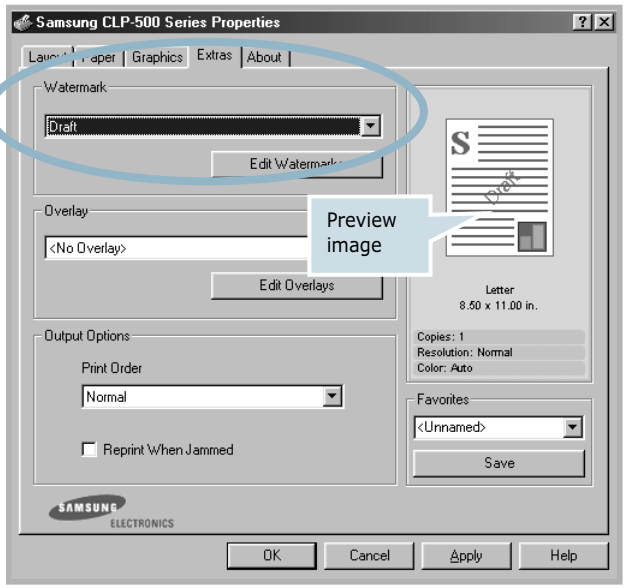
The Watermark option allows you to print text over an existing document. For example, you may want to have large gray letters reading "DRAFT" or "CONFIDENTIAL" printed diagonally across the first page or all of the pages of a document.

There are several predefined watermarks that come with your printer, and they can be modified or you can add new ones to the list.

Using an Existing Watermark

1 When you change the print settings from your software application, access the printer Properties. See page 3.3.

2 Click the **Extras** tab, and select a watermark from the **Watermark** drop-down list. You will see the selected watermark in the preview image.



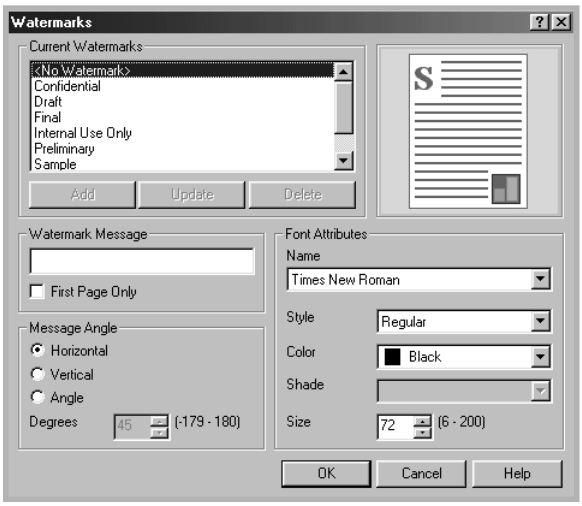
3 Click **OK** and start printing.

NOTE: The preview image shows how the page will look when it is printed.

Creating a Watermark

1 When you change the print settings from your software application, access the printer Properties. See page 3.3.

2 Click the **Extras** tab, and click the **Edit Watermarks** button in the **Watermark** section. The Watermarks window appears.



3 Enter a text message in the **Watermark Message** box. You can enter up to 40 characters and it displays in the preview window.

When the **First Page Only** box is checked, the watermark prints on the first page only.

4 Select the watermark options.

You can select the font name, style, color, grayscale level and size from the **Font Attributes** section and set the angle of the watermark from the **Message Angle** section.

5 Click **Add** to add a new watermark to the list.

6 When you finish editing, click **Ok** and start printing.

To stop printing the watermark, select **<No Watermark>** from the **Watermark** drop-down list.

Editing a Watermark

1. When you change the print settings from your software application, access the printer Properties. See page 3.3.

2. Click the **Extras** tab, and click the **Edit Watermarks** button in the **Watermark** section. The Watermarks window appears.

3. Select the watermark you want to edit from the **Current Watermarks** list to change the watermark message and the options. Refer to page 4.11.

4. Click **Update** to save the changes.

5. Click **Ok**.

Deleting a Watermark

1. When you change the print settings from your software application, access the printer Properties. See page 3.3.

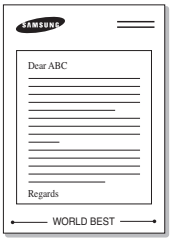
2. From the **Extras** tab, click the **Edit Watermarks** button in the **Watermark** section. The Watermarks window appears.

3. Select the watermark you want to delete from the **Current Watermarks** list and click **Delete**.

4. Click **Ok**.

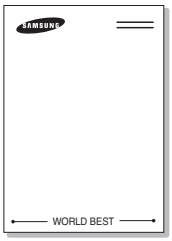
Using Overlays

What is an Overlay?



An overlay is text and/or images stored on the computer hard disk drive (HDD) as a special file format that can be printed on any document. Overlays are often used to take the place of preprinted forms and letterhead paper. Rather than using preprinted letterhead, you can create an overlay containing the exact same information that is currently on your letterhead. To print a letter with your company's letterhead, you need only tell the printer to print the letterhead overlay on your document.

Creating a New Page Overlay

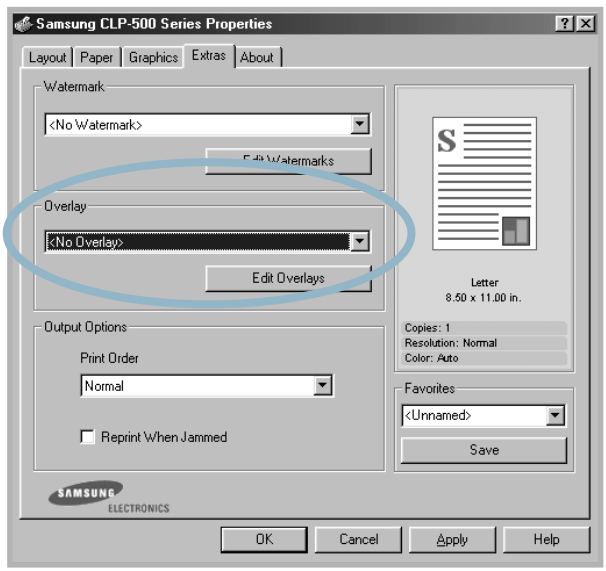


To use a page overlay, you must create a new page overlay containing your logo or image.

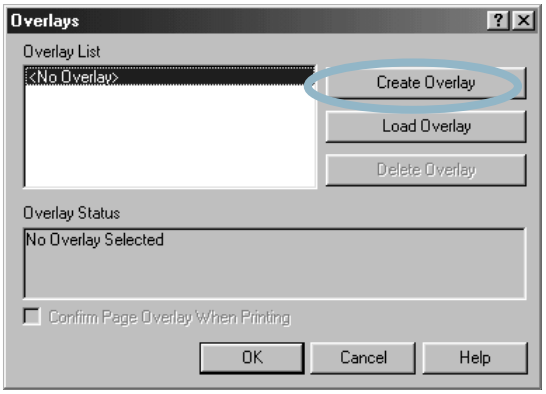
1. Create or open a document containing text or an image for use in a new page overlay. Position the items exactly as you wish them to appear when printed as an overlay. If needed, save the file for later use.

2. When you change the print settings from your software application, access the printer Properties. See page 3.3.

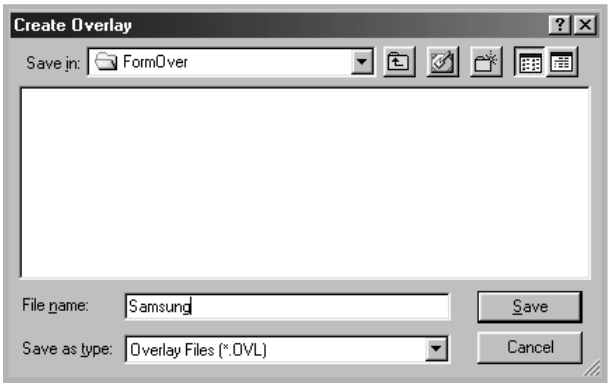
3. Click the **Extras** tab, and click the **Edit Overlays** button in the **Overlay** section.



4 In the Overlays window, click **Create Overlay**.



5 In the Create Overlay window, type a name of up to eight characters in the **File name** box. Select the destination path, if necessary. (The default is C:\Formover).



6 Click **Save**. The name appears on the **Overlay List** box.

7 Click **OK** or **Yes** to finish creating.

The file is not printed out. Instead it is stored on your computer hard disk drive.

NOTE: The overlay document size must be the same as the documents you print with the overlay. Do not create an overlay with a watermark.

Using a Page Overlay

After an overlay has been created, it is ready to be printed with your document. To print an overlay with a document:

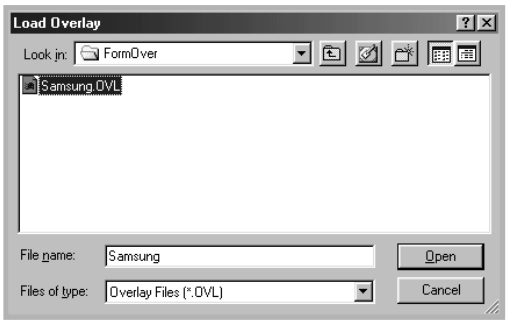
1. Create or open the document you want to print.

2. When you change the print settings from your software application, access the printer Properties. See page 3.3.

3. Click the **Extras** tab.

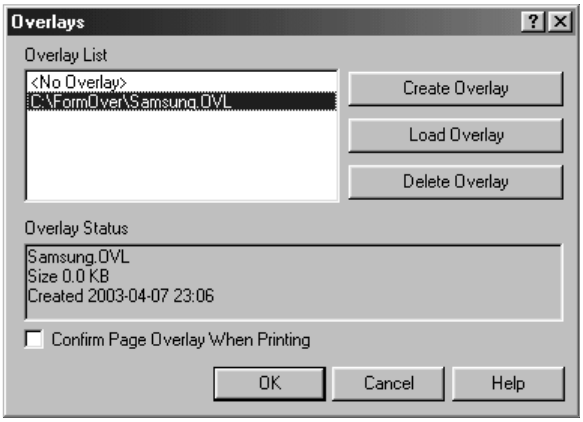
4. Select an overlay from the **Overlay** drop-down list box.

5. If the overlay file you want does not appear on the **Overlay** list, click the **Edit Overlays** button and **Load Overlay**, and select the overlay file.



If you have stored the overlay file you want to use in an external source, you can also load the file when you access this Load Overlay window.

After you select the file, click **Open**. The file appears in the **Overlay List** box and is available for printing. Select the overlay from the **Overlay List** box.



6 If necessary, click **Confirm Page Overlay When Printing**. If this box is checked, a message window appears each time you submit a document for printing, asking you to confirm your wish to print an overlay on your document.

If this box is empty and an overlay has been selected, the overlay automatically prints with your document.

7 Click **OK** or **Yes** until the printing starts.

The selected overlay downloads with your print job and prints on your document.

NOTE: The resolution of the overlay document must be the same as that of the document you are printing with the overlay.

Deleting a Page Overlay

You can delete page overlays that you no longer use.

1 In the printer Properties window, click the **Extras** tab.

2 Click **Edit Overlays** button in the **Overlay** section.

3 Select the overlay you want to delete from the **Overlay List** box.

4 Click **Delete Overlay**.

5 Click **OK** until you exit the Print window.

5 USING THE CONTROL PANEL

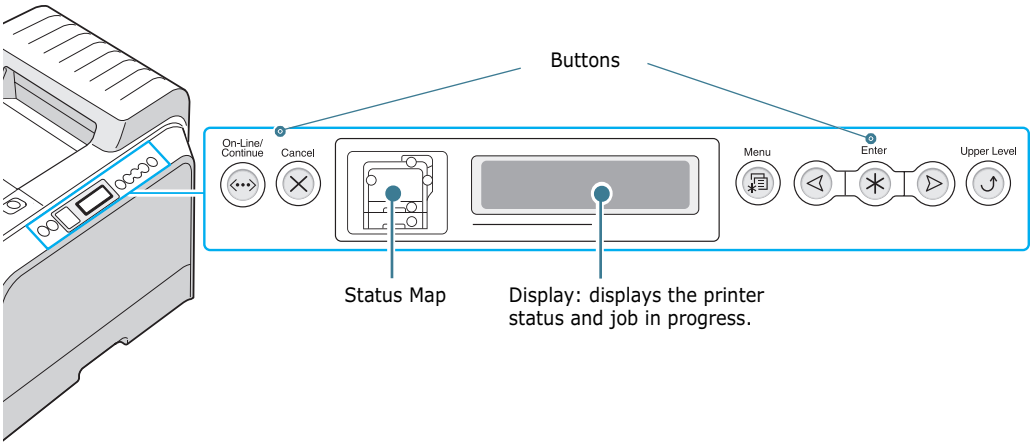
This chapter describes how to use the printer's control panel.

This chapter includes:

- **Understanding the Control Panel**
- **Using Control Panel Menus**

Understanding the Control Panel

The control panel on the top right side of your printer has a display and seven buttons.

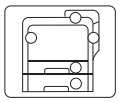


Display

Message	Description
Ready	• The printer is on-line and ready to print. • If you press **On-Line/Continue**, the printer switches to off-line.
Offline	• The printer is off-line and cannot print. • If you press **On-Line/Continue**, the printer switches to on-line.
Processing	• The printer is printing. • If you want to cancel printing, press **Cancel**.
Sleeping...	• The printer is in Power Save mode, using less power. When a print job is received from the computer or if any button is pressed, the printer switches to on-line. • To deactivate the Power Save mode or change the power-saving time, see page 5.9.

See "Understanding Display Messages" on page 7.24 for a complete listing of all the printer messages.

Buttons

<table>
<tr><th>Button</th><th colspan="3">Description</th></tr>
<tr><td> 
(status map)</td><td colspan="3">When an error occurs, a lamp turns on at the corresponding location on the Status map. An error message appears on the display so that you can locate the error. For details on the meaning of the error messages, see page 7.24.</td></tr>
<tr><td rowspan="6">On-Line/ Continue</td><td colspan="3">• Press to switch between on-line and off-line.
• In menu mode, press to return to ready mode.

You can check the printer status according to the button backlight.</td></tr>
<tr><td rowspan="2">Green</td><td>On</td><td>The printer is on-line and can receive data from the computer.</td></tr>
<tr><td>Blinking</td><td>• When the backlight blinks slowly, the printer is receiving data from the computer.
• When the backlight blinks quickly, the printer is receiving and printing data.</td></tr>
<tr><td rowspan="2">Orange</td><td>On</td><td>The printer stops printing due to a major error. Check the display message. See page 7.24 for details on the meaning of the error message.</td></tr>
<tr><td>Blinking</td><td>A minor error is occurring and the printer is waiting for the error to be cleared. Check the display message. When the problem is cleared, the printer resumes printing. If you want to ignore this warning, press this button.</td></tr>
<tr><td>Off</td><td colspan="2">• The printer is off-line and cannot print.
• The printer is in Power Save mode. When data is received, it switches to on-line.</td></tr>
<tr><td>Menu</td><td colspan="3">• Press to enter menu mode.
• In menu mode, press to scroll through the menus.</td></tr>
</table>

Button	Description
	In menu mode, press to select the displayed submenu item or confirm the changed setting. The selected item is marked with an *.
	In menu mode, press to scroll through submenu items or setting options. Pressing ► moves you to the next option and pressing ◄ sends you back to the previous option.
	• Press to cancel the current print job. • In menu mode, press to return to ready mode.
	In menu mode, press to go back to the upper menu level.

Using Control Panel Menus

A number of menus are available to make it easy for you to change the printer settings. The diagram on page 5.6 shows the menus and all of the items available in each menu. The items in each menu and the options you can select are described in more detail in the tables beginning on page 5.6.

Accessing Control Panel Menus

You can configure your printer from the printer's control panel. You can also use the control panel menus while the printer is in use.

1. In ready mode press the **Menu** button ( ) until you see the menu you want on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until the menu item you want displays on the bottom line.
4. Press the **Enter** button ( ) to confirm the selected item.
5. If the menu item has submenus, repeat steps 3 and 4.
6. Press the scroll button (or) until the setting option you want displays on the bottom line or enter the required value.
7. Press the **Enter** button ( ) to save your input or selection.

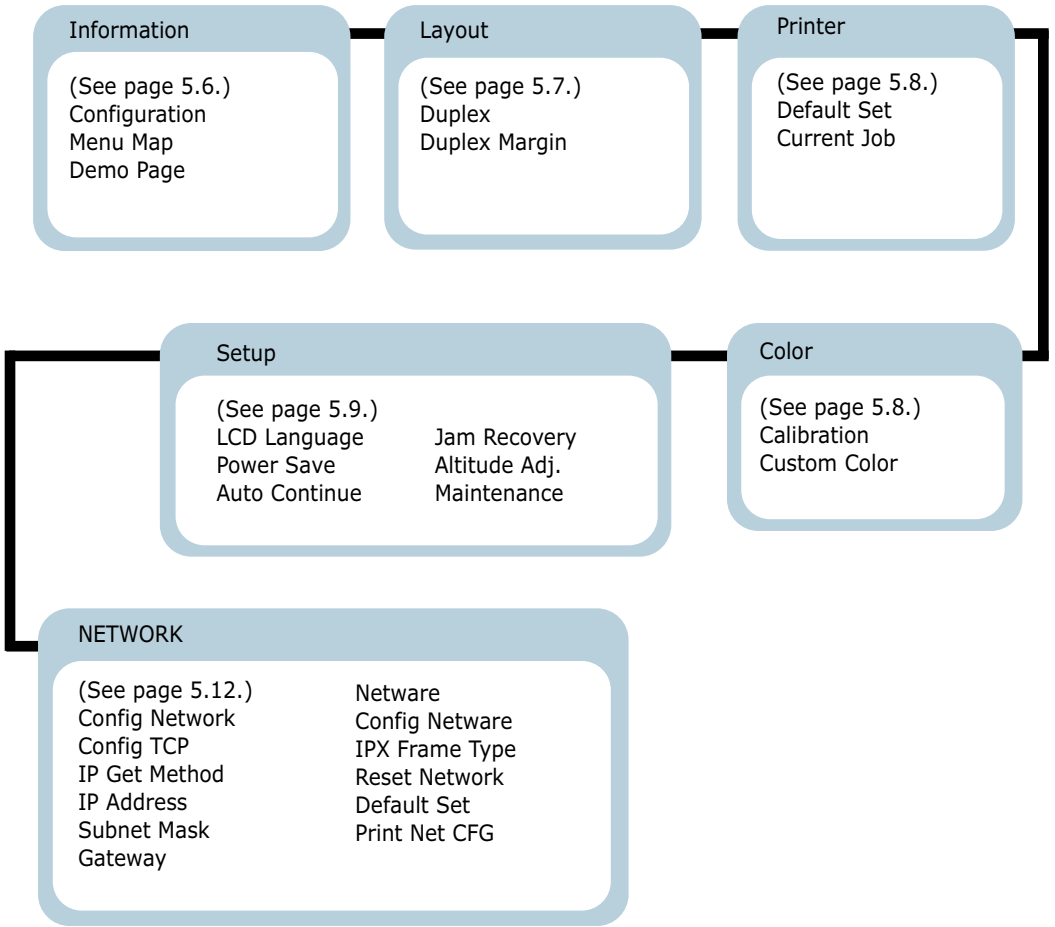
   An asterisk (*) appears next to the selection on the display, indicating that it is now the default.
8. To exit the menu, press the **Upper Level** button ( ) repeatedly, or the **Cancel** button( ).

   After 60 seconds of inactivity (no key has been pressed), the printer automatically returns to ready mode.

NOTE: Print settings made from the printer driver override the settings on the control panel.

Overview of Control Panel Menus

The control panel menus are used to configure the printer. The control panel provides access to the following menus:



Information Menu

This menu contains information pages that you can print that give details about the printer and its configuration.

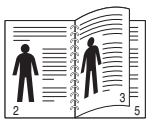
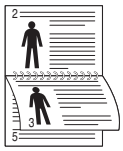
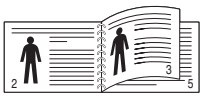
Item	Explanation
Configuration	The configuration page shows the printer's current configuration. See page 6.2.
Menu Map	The menu map shows the layout and current settings of the control panel menu items.

Item	Explanation
Demo Page	The demo page allows you to check to see if your printer is printing properly.

Layout Menu

Use the **Layout** menu to define all settings relating to output.

(*: the default setting)

Item	Explanation
Duplex	Options: Off*, Long Edge, Short Edge To print on both sides of paper, choose the edge as follows. • **Long Edge**: Flips on the long edge. Prints pages to read like a book. • **Short Edge**: Flips on the short edge. Prints pages to read by flipping over like a note pad.  Long Edge in the Portrait orientation  Long Edge in the Landscape orientation Short Edge in the Portrait orientation  Short Edge in the Landscape orientation Select **Off** to print on one side of the paper.

Item	Explanation
Duplex Margin	In this menu, you can set the margins for double-sided printing. You can increase or decrease the value in 0.1mm increments. • **Top Margin**: Set the top margin, from 0.0mm to 9.9mm. • **Left Margin**: Set the left margin, from 0.0mm to 9.9mm. • **Short Binding**: Set the bottom margin of the back of the page for short binding, from 0.0mm to 10mm. • **Long Binding**: Set the right margin of the back of the page for long binding, from 0.0mm to 22mm.

Printer Menu

This menu allows you to reset the printer settings or cancel the current job.

Item	Explanation
Default Set	This menu item allows you to restore the printer's factory default settings.
Current Job	You can cancel the current print job and remove it from the printer buffer.

Color Menu

This menu allows you to adjust the color setting.

Item	Explanation
Calibration	Options: Off, Auto*, Run Now This menu item allows you to calibrate the printer for the best possible color printer quality. • **Off**: The printer is calibrated by the default setting. • **Auto**: It automatically calibrates the printer to produce the best possible print quality for color documents. • **Run Now**: It manually calibrates the printer.

Item	Explanation
Custom Color	This item allows you to adjust a specific color contrast individually. • **CMYK:** It allows you to adjust the contrast of the toner in each toner cartridge. **Default**: It optimizes the colors automatically. **Manual Adjust**: It allows you to manually adjust the selected color contrast for each cartridge. **Note**: You should use the **Default** setting for a best color quality.

Setup Menu

Use the **Setup** menu to configure a variety of printer features.

(*: the default setting)

Item	Explanation
LCD Language	Options: English*, German, French, Italian, Spanish, Russian The LCD Language setting determines the language of the text that appears on the control panel display and information printing.
Power Save	Options: Off, 5 Minutes, 10 Minutes, 15 Minutes, 30 Minutes*, 45 Minutes, 60 Minutes When the printer does not receive data for an extended period of time, power consumption is automatically lowered. Set how long the printer waits before going to power save.

Item	Explanation
Auto Continue	Options: Off, On* This item determines whether or not the printer continues printing when it detects paper mismatched to your paper setting. • **Off**: If a paper mismatch occurs, the message remains on the display and the printer remains off-line until you insert the correct paper. • **On**: If the paper is mismatched, an error message displays. The printer goes off-line for 30 seconds then automatically clears the message and continues printing.
Jam Recovery	Options: Off*, On This item determines how the printer behaves when a paper jam occurs. • **Off**: The printer does not reprint pages. Printing performance might be increased with this setting. • **On**: The printer automatically reprints pages after you clear the paper jam.
Altitude Adj.	Options: Low*, High You can optimize the print quality according to your altitude.

Item	Explanation
Maintenance	This item allows you to maintain the toner cartridge and other consumables. • **Check Toner**: allows you to check how much toner is left in the each cartridge. See page 6.4. • **Check Others** **Drum**: allows you to check the total number of images printed, since the image counter was last set to zero by using the **Reset** menu. See page 6.20. **Transfer**: allows you to check the total number of images printed, since the image counter was last set to zero by using the **Reset** menu. See page 6.21. **Fuser**, **T2 Roller**, **Pickup MP**, **Pickup Tray1**, **Pickup Tray2**: These items are only for the service technians. • **Alarm Shortage**: This item determines how the printer behaves when the consumables are low. **Off**: The printer does not display the warning message. **On**: The printer displays the warning message.

Network Menu

This menu lets you configure the network interface card installed in your printer according to how the network is set up. You can upgrade the firmware of the network interface card, and print the configuration.

(*: the default setting)

Item	Explanation
Config Network	Options: Yes, No* Sets whether or not you want to configure the network. If you select **Yes**, you can configure the TCP/IP and Netware menus. If you select **Yes**, the following options are available: **Config TCP**, **Netware** and **Config Netware**.
Config TCP	Options: Yes, No* Select whether you want to set the IP address or not. If you select **Yes**, you can configure IP address item. If you select **Yes**, the following options are available: **IP Get Method**, **IP Address**, **Subnet Mask** and **Gateway**.
IP Get Method	Options: Static*, BOOTP, DHCP You can set this item only when you set the **Config TCP** to **Yes**. • **Static**: You can enter IP address, subnetmask, and gateway manually. • **BOOTP**: The BOOTP server allots the IP address to you automatically. • **DHCP**: The DHCP server allots the IP address to you automatically.

Item	Explanation
IP Address	You can select this item only when you set **IP Get Method** to **Static**. This item lets you enter the IP address manually. Press the scroll button to set the value of the 1st byte between 1 and 255, and then press the **Enter** button. Set the value for the 2nd to the 4th byte the same way.
Subnet Mask	You can set this item only when you set **IP Get Method** to **Static**. This item lets you enter the subnet mask manually. Press the scroll button to set the value of the 1st byte between 1 and 255, and then press the **Enter** button. Set the value for the 2nd to the 4th byte the same way.
Gateway	You can set this item only when you set **IP Get Method** to **Static**. This item lets you enter the gateway manually. Press the scroll button to set the value of the 1st byte between 1 and 255, and then press the **Enter** button. Set the value for the 2nd to the 4th byte the same way.
Netware	Options: On*, Off You can select whether or not you want to use the Netware protocol. If you select **On**, you can access the **Config Netware** menu item. In the **Config Netware** menu, you can specify the frame type parameter used on your network.
Config Netware	Options: Yes, No* You can set this item only when you set **Netware** to **On**. This item lets you select whether or not you set the frame type parameter. Select **Yes** to select the frame type. If you select **Yes**, the **IPX Frame Type** option appears on the display.

Item	Explanation
IPX Frame Type	Values:Auto*, EN_8022, EN_8023, EN_II, EN_SNAP You can select this item only when you set **Config Netware** to **Yes**. This item lets you select IPX Frame Type. • **Auto**:You can set the frame type automatically. • **EN_8022**: Select this value to use the IEEE 802.2 frame type. • **EN_8023**:Select this value to use the IEEE 802.3 frame type. • **EN_II** :Select this value to use the ETHERNET II frame type. • **EN_SNAP**:Select this value to use the SNAP frame type.
Reset Network	This item reboots the network interface card.
Default Set	This item performs a simple reset and restores the factory default for the network configuration.
Print Net CFG	This item prints a page showing the network parameters you set.

6 Maintaining Your Printer

This chapter provides information for maintaining your printer and suggestions for high-quality and economical printing.

This chapter includes:

- **Printing a Configuration Page**
- **Replacing the Supplies**
- **Managing the Toner Cartridges**
- **Replacing the Toner Cartridges**
- **Replacing the Waste Toner Container**
- **Replacing the Drum Cartridge**
- **Replacing the Image Transfer Unit**
- **Cleaning the Printer**
- **Consumables and Replacement Part**

Printing a Configuration Page

You can print a configuration page from the printer's control panel. Use the configuration page to view the current settings, to help troubleshoot problems, or to verify the installation of optional accessories, such as memory or an optional tray.

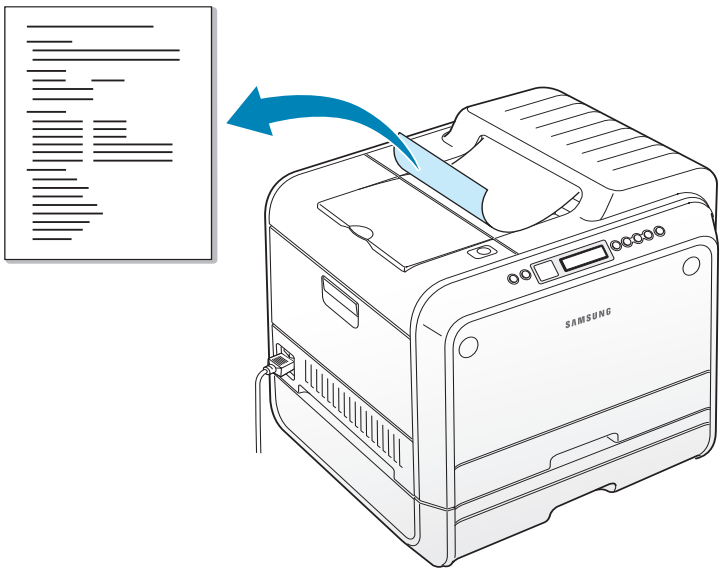
To print the configuration page:

1. In ready mode press the **Menu** button ( ) on the control panel until you see 'Information' on the bottom line of the display.

2. Press the **Enter** button ( ) to access the menu.

3. Press the **Enter** button ( ) when 'Configuration' displays on the bottom line.

   The configuration page prints out.



Replacing the Supplies

From time to time, you need to replace the following items to maintain top performance and to avoid print quality problems. Refer to the table below:

Item(s)	Printer message	Pages Printed	See page
Black toner cartridge	Replace Toner Black	7,000 pages*	6.7.
Color toner cartridges	Replace Toner [Color]	5,000 pages*	6.7.
Waste toner container	Waste Toner Tank Full/Not Install	3,000 images**	6.10.
Drum cartridge	Replace Drum Cartridge	50,000 images**	6.13.
Image transfer unit	Replace Image Transfer	50,000 images**	6.21.

*Average A4-/letter-sized pages counts based on 5% coverage of individual colors on each page. Usage conditions and print patterns may cause results to vary.

**Image counts based on one color on each page. If you print documents in full colors (Cyan, Magenta, Yellow, Black), the lives of these three items are reduced by 25%.

Managing the Toner Cartridges

Toner Cartridge Storage

To get the maximum results from the toner cartridge, keep the following guidelines in mind:

- Do not remove the toner cartridges from their packages until you are ready to use them.
- Do not refill the toner cartridges. **The printer warranty does not cover damage caused by using a refilled cartridge.**
- Store the toner cartridges in the same environment as the printer.
- To prevent damage to the toner cartridges, do not expose them to light for more than a few minutes.

Toner Cartridge Life Expectancy

The life of the toner cartridge depends on the amount of toner that your print jobs require. When printing text at 5% coverage, a new toner cartridge lasts an average of 7,000 pages for black and 5,000 pages for each color. The initial toner cartridge supplied with the printer lasts an average of 2,000 pages for black and 1,500 pages for each color.

At any time, you can verify the life expectancy by checking the toner level. See the below.

Checking the Remaining Toner

You can check the level of toner left in each cartridge.

1. In ready mode press the **Menu** button ( ) on the control panel until you see 'Setup' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until 'Maintenance' displays on the bottom line.
4. Press the **Enter** button ( ).
5. When 'Check Toner' displays on the bottom line, press the **Enter** button ( ).

6 Press the scroll button (◁ or ▷) until the color of the toner cartridge you want to check displays on the bottom line.

7 Press the **Enter** button (✳).

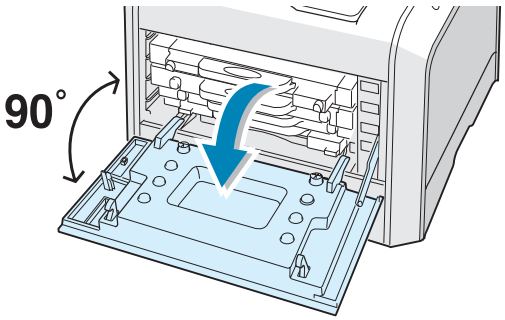
The display shows the percentage of the remaining toner.

Redistributing the Toner

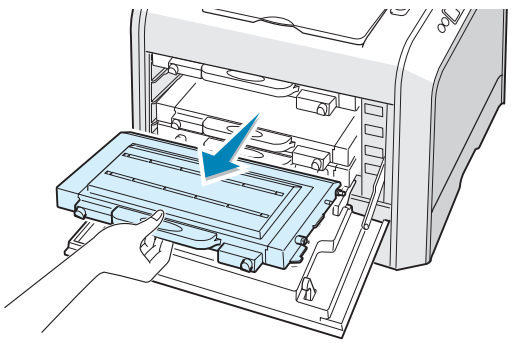
When a toner cartridge is nearly empty, faded or light areas may appear on a printed page and 'Ready [CMYK] Low Toner' appears on the display. The printer can continue to print using the current toner cartridge until the control panel displays a message telling you to replace the cartridge.

You may be able to temporarily improve the print quality by redistributing the toner. The control panel display tells you which color cartridge is low in toner.

1 Using the handle, open the left cover completely.

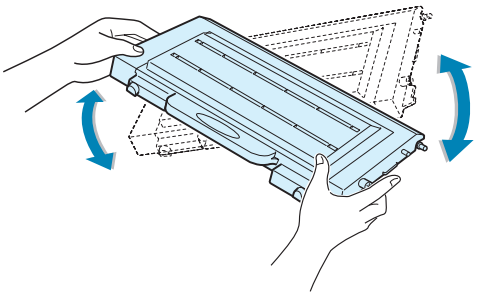


2 Pull the handle lightly first, and then holding the used toner cartridge, remove it.



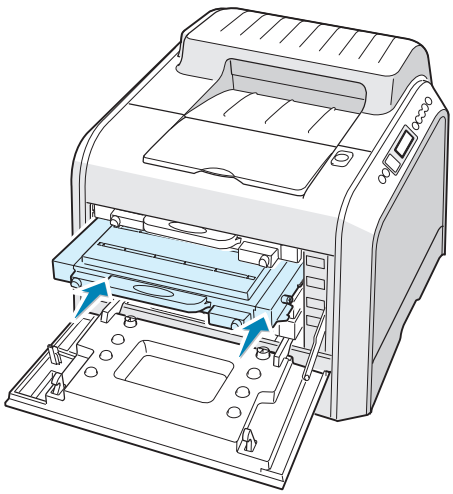
CAUTION: If you open the left cover for a long time, the drum cartridge can be exposed to light. This causes damage to the drum cartridge.

3 Holding both sides of the toner cartridge, gently roll it from side to side to redistribute the toner.

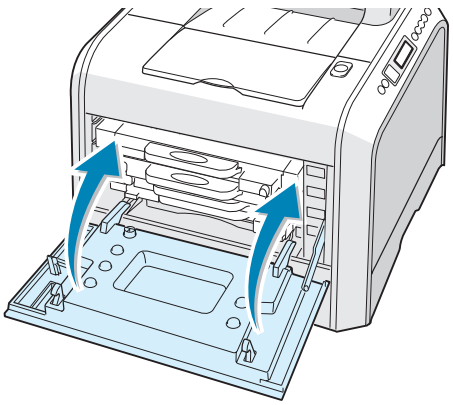


NOTE: If toner gets on your clothing, wipe it off with a dry cloth and wash it in cold water. Hot water sets toner into fabric.

4 Slide the toner cartridge back into the printer.



5 Close the left cover. Make sure that the cover is securely latched.



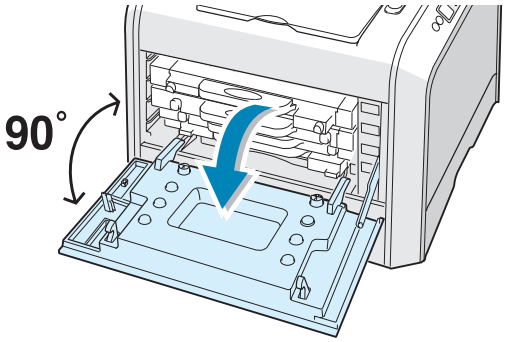
Replacing the Toner Cartridges

The printer uses four colors and has a different toner cartridge for each one: cyan (C), magenta (M), yellow (Y), and black (B).

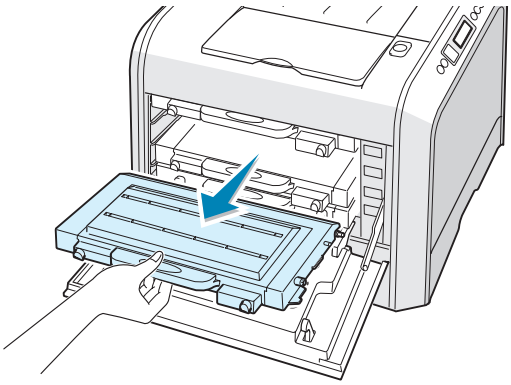
Replace a toner cartridge when the printer control panel displays 'Replace Toner [Color]'. The control panel display tells you which color needs to be replaced.

1 Turn the printer off.

2 Using the handle, open the left cover completely.

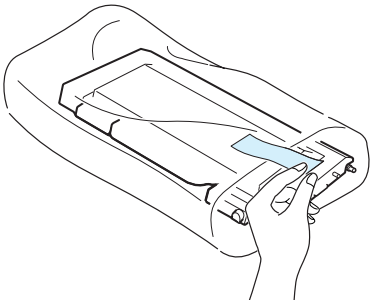


3 Pull the handle lightly first, and then holding the used toner cartridge, remove it.



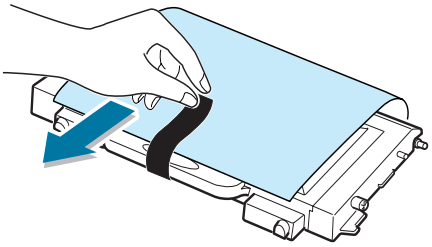
CAUTION: If you open the left cover for a long time, the drum cartridge can be exposed to light. This causes damage to the drum cartridge.

4 Take a new toner cartridge out of the package.

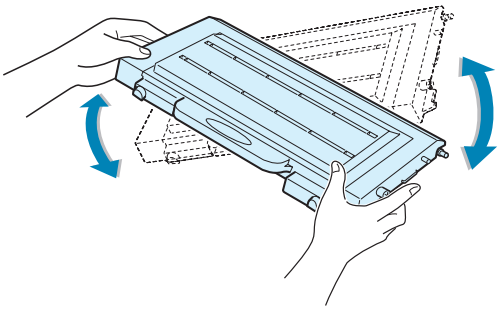


CAUTION: Don't use sharp objects, such as a knife or scissors, to open the toner cartridge package. You could damage the surface of the toner cartridge.

5 Place the toner cartridge on a flat surface as shown and remove the paper covering the toner cartridge by removing the tape. Discard the paper and tape.

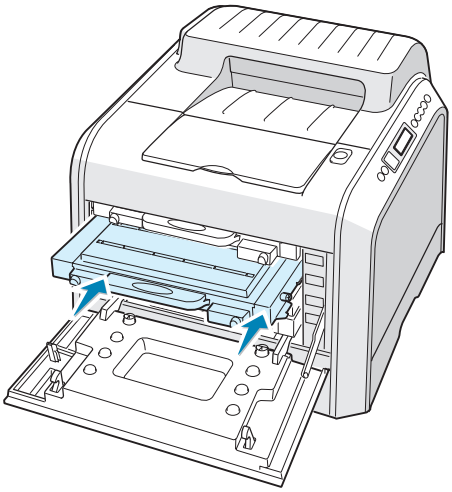


6 Holding both sides of the toner cartridge, gently roll it from side to side to distribute the toner.

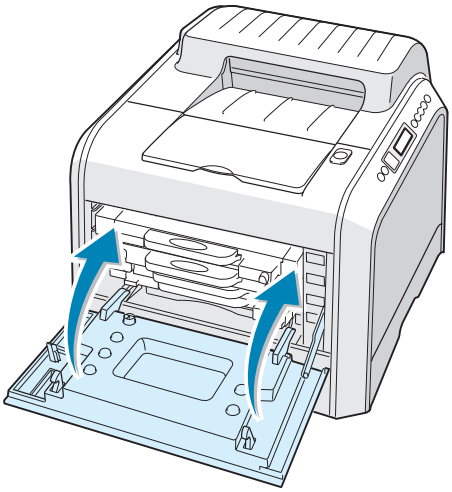


NOTE: If toner gets on your clothing, wipe it off with a dry cloth and wash it in cold water. Hot water sets toner into fabric.

7 Make sure that the color of the toner cartridge matches the color slot and then slide the new toner cartridge into the printer.



8 Close the left cover. Make sure that the cover is securely latched, and then turn the printer on.

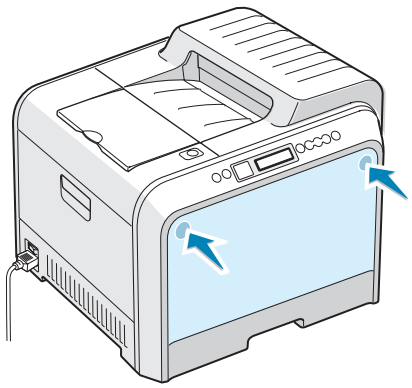


9 Open the front cover and clean the LSU. For details, see page 6.27.

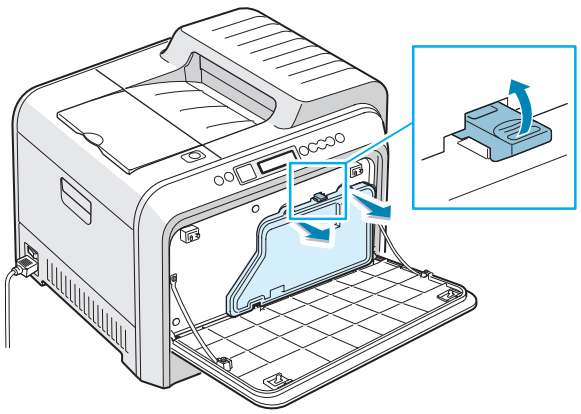
Replacing the Waste Toner Container

Replace the waste toner container when the control panel displays 'Waste Toner Tank Full/Not Install'.

1 Unlatch the front cover, by quickly pressing and releasing it using the depressions at the top.

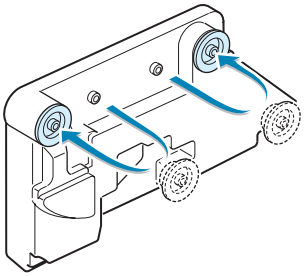


2 Push the lock lever up and pull the waste toner container out.



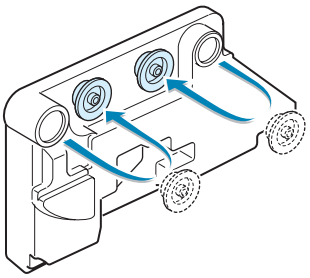
NOTE: Make sure that you lay the waste toner container on a flat surface so that the toner does not spill.

3 Remove the container's caps which are attached as shown below and use them to close the waste toner container.

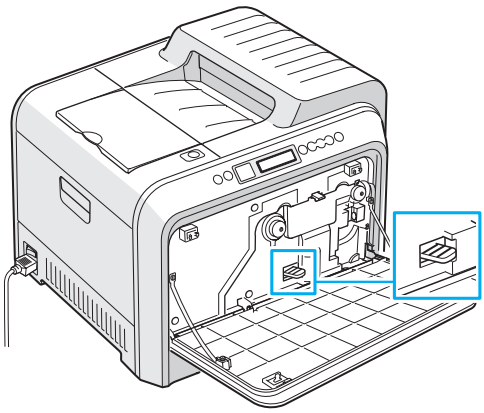


4 Take a new waste toner container out of the package.

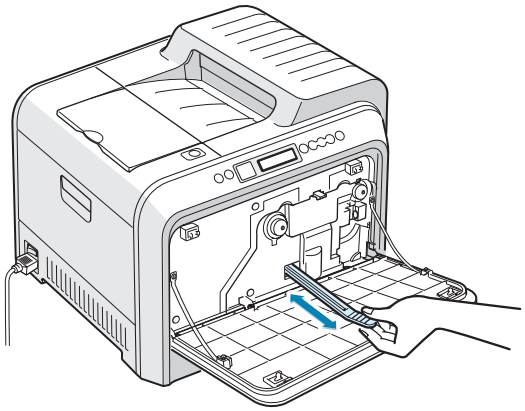
5 Open the caps on the new container and attach them for future use as shown below.



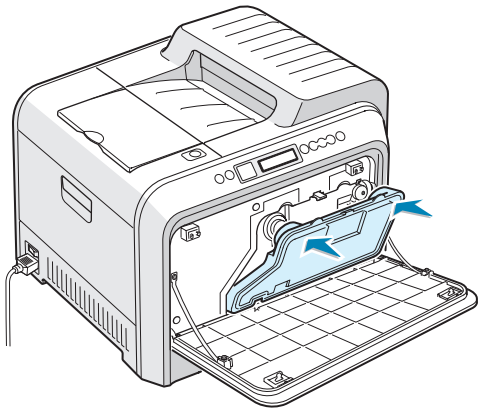
6 Locate the supplied LSU cleaner on the bottom.



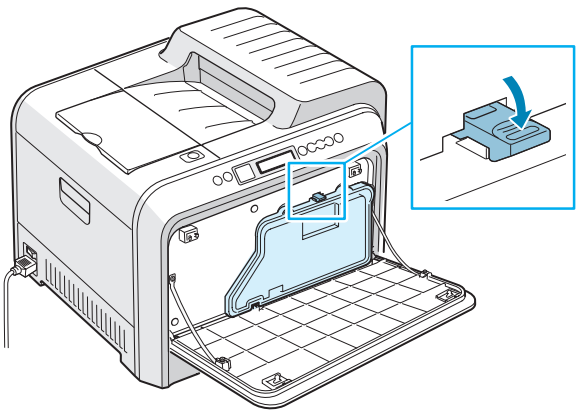
7 Holding the end of the cleaner, slide it in and out several times.



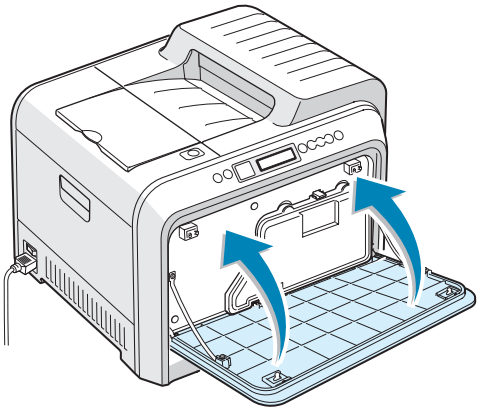
8 Insert the lower of the new container into place and then push it to make sure that it is seated in place.



9 Make sure that the lock lever latches the container.



10 Close the front cover. Make sure that the cover is securely latched.

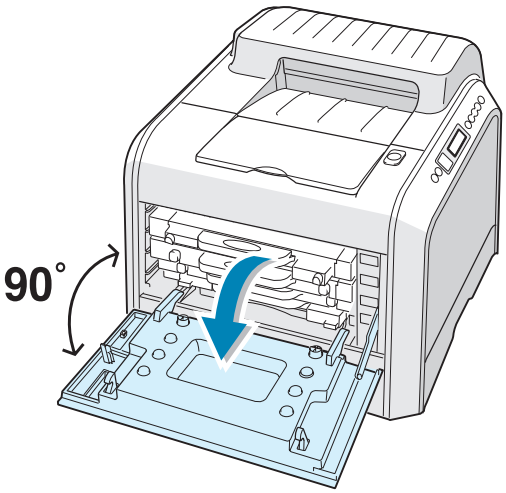


Replacing the Drum Cartridge

The life of the drum cartridge is approximately 50,000 images. Replace the drum cartridge when the printer control panel displays 'Replace Drum Cartridge'.

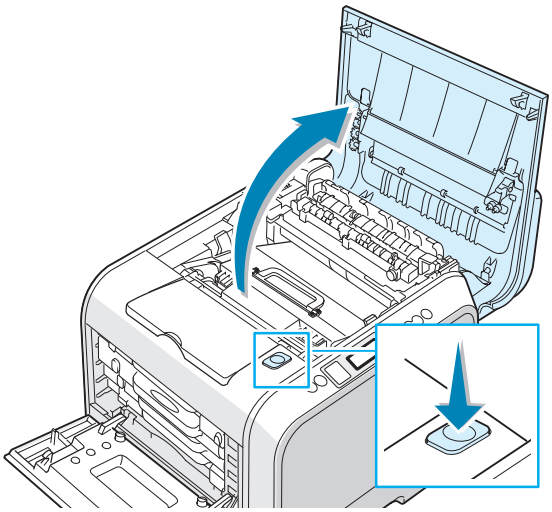
1 Turn the printer off.

2 Using the handle, open the left cover completely.

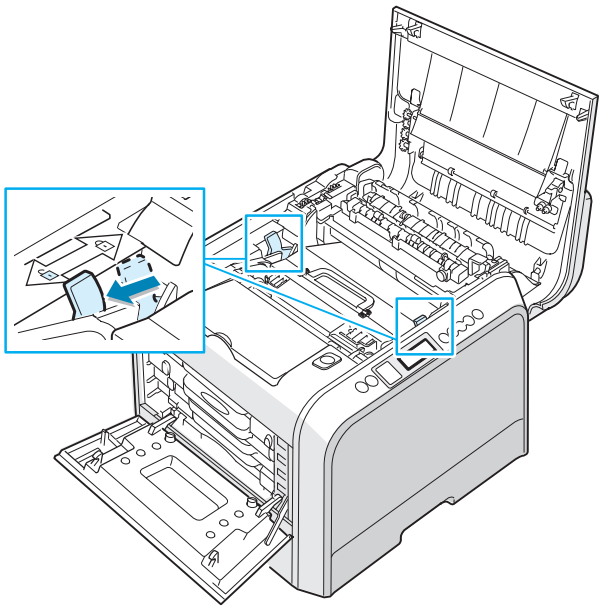


CAUTION: If the left cover is not completely open, the top cover release button does not press.

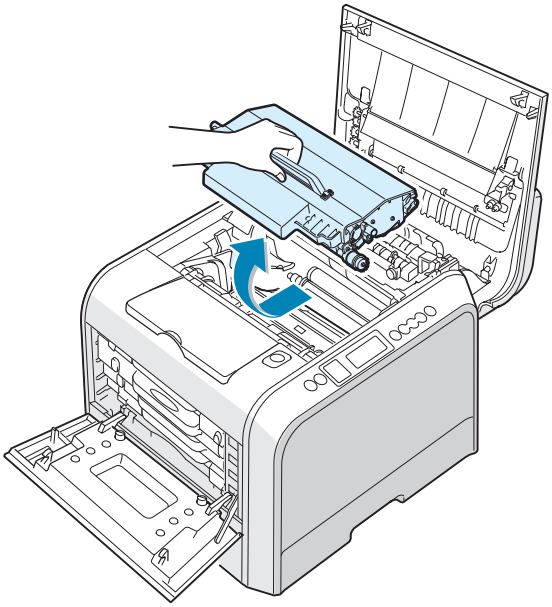
3 Press the top cover release button to unlatch the top cover and open it all the way.



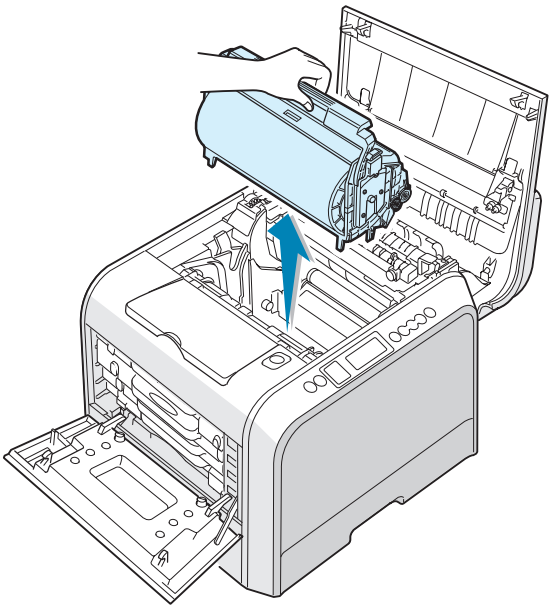
4 Pull the lock levers on each side towards you, as shown below, to release the image transfer unit.



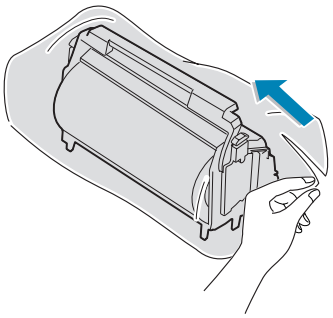
5 Using the handle, lift the image transfer unit out of the printer by lightly pulling it towards the left of the machine. Set it on a clean flat surface.



6 Lift the handle of the used drum cartridge and use it to pull the drum cartridge out of the printer.



7 Take a new drum cartridge out of the package using the handle.

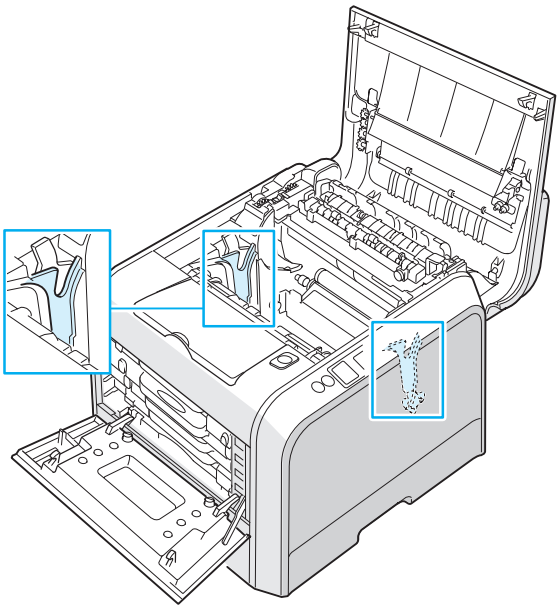


8 Remove the paper covering the drum cartridge by removing the tape under the handle of the drum cartridge.

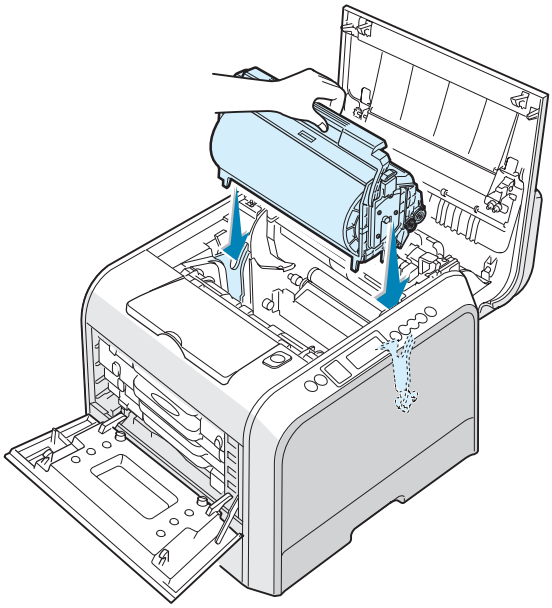
CAUTIONS:

- Don't use sharp objects, such as a knife or scissors, to open the drum cartridge package. You could damage the surface of the drum.
- To prevent damage, do not expose the drum cartridge to light for more than a few minutes. Cover it with black paper, if necessary.
- Do not touch the surface of the green roller on the drum cartridge or print quality problems can occur.

9 Locate the drum cartridge slots inside the printer, one on each side.

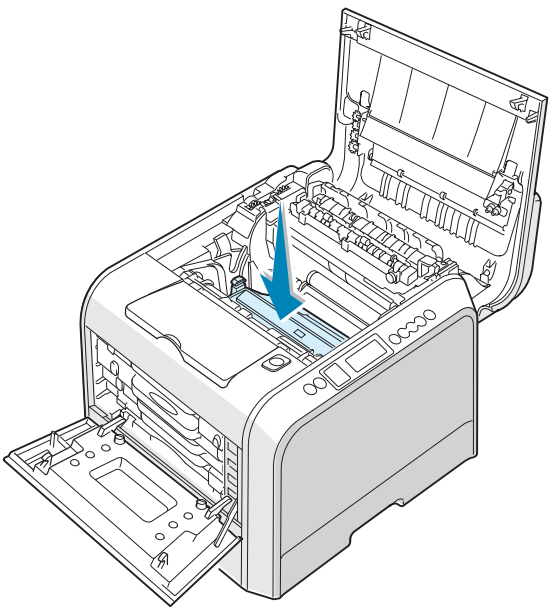


10 Hold the handle of the new drum cartridge with the green roller facing you. Then align the drum cartridge with the slots in your printer.

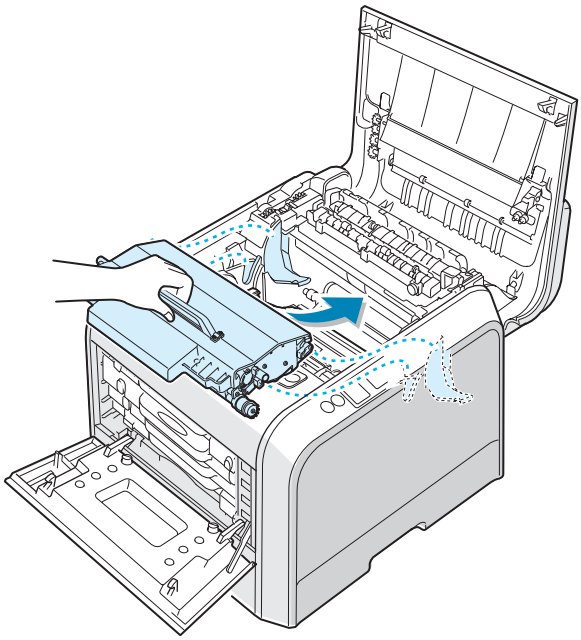


CAUTION: Insert the drum cartridge carefully so as not to scratch and damage the surface of the green roller.

11 Slide the new drum cartridge down into the printer until it latches into place and fold the handle down.

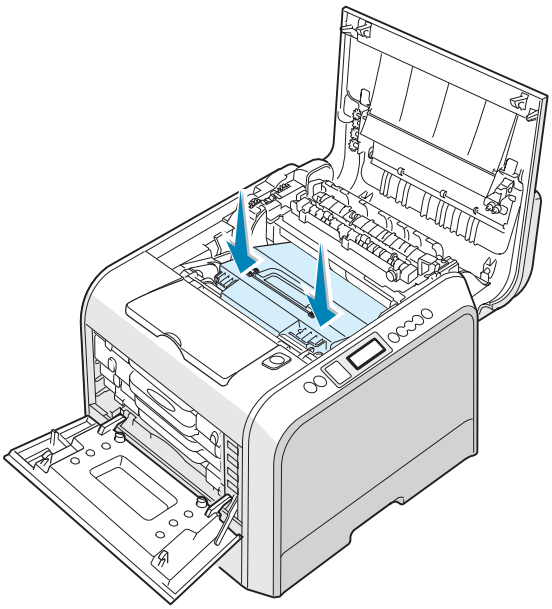


12 To replace the image transfer unit, hold its handle and then align it with the slots inside your printer, on each side.

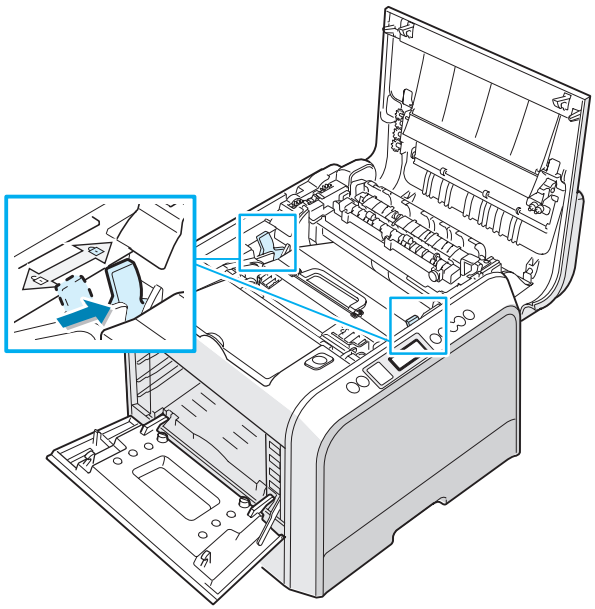


NOTE: Do not turn the transfer unit over. If you do this, the toner may spill.

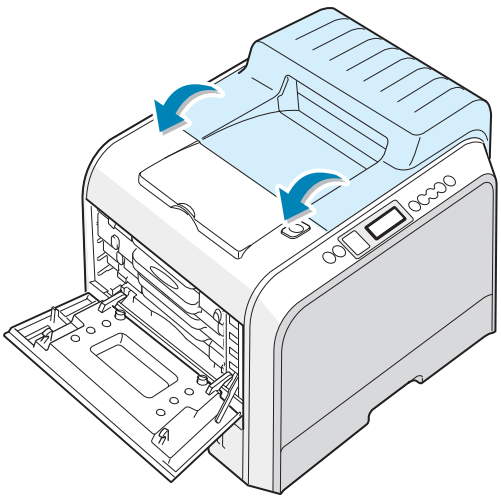
13 Slide the image transfer unit down into the printer and press it firmly into place.



14 Firmly push the lock levers on each side away from you, as shown below, to lock the image transfer unit into place.

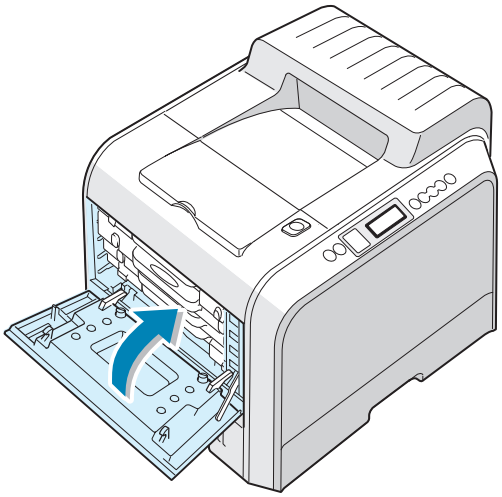


15 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.



CAUTION: Do not try to close the top cover with the left cover closed. This may cause damage to the machine.

16 Close the left cover firmly.



17 Open the front cover and clean the LSU. For details, see page 6.27.

18 Turn the printer on.

19 In ready mode press the **Menu** button ( ) on the control panel until you see 'Setup' on the bottom line of the display.

20 Press the **Enter** button ( ) to access the menu.

21 Press the scroll button (or) until 'Maintenance' displays on the bottom line and press the **Enter** button ( ).

22 Press the scroll button (or) to until 'Check Others' displays on the bottom line and press the **Enter** button ( ).

23 Press the **Enter** button ( ) when the first menu item, 'Drum' displays on the bottom line.

24 Press the scroll button (or) to display 'Reset' and press the **Enter** button ( ).

25 'Reset Now' appears on the bottom line of the display. The image counts of the drum cartridge are set to zero.

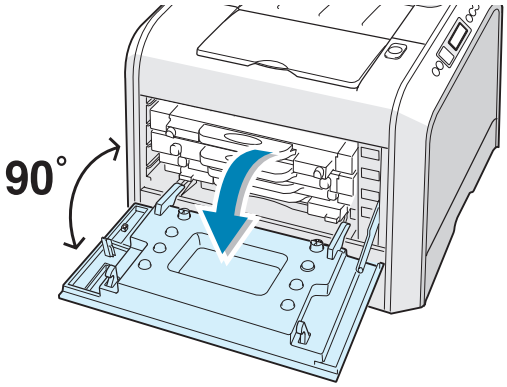
Replacing the Image Transfer Unit

The life of the image transfer unit is approximately 50,000 images. Replace the image transfer unit when the control panel displays 'Replace Image Transfer'.

To replace the image transfer unit:

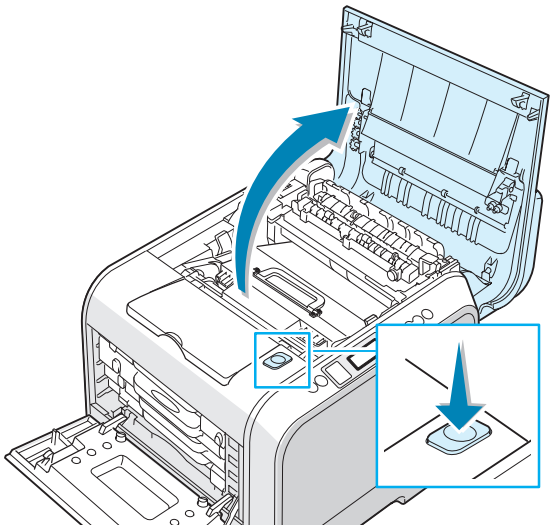
1 Turn the printer off.

2 Using the handle, open the left cover completely.

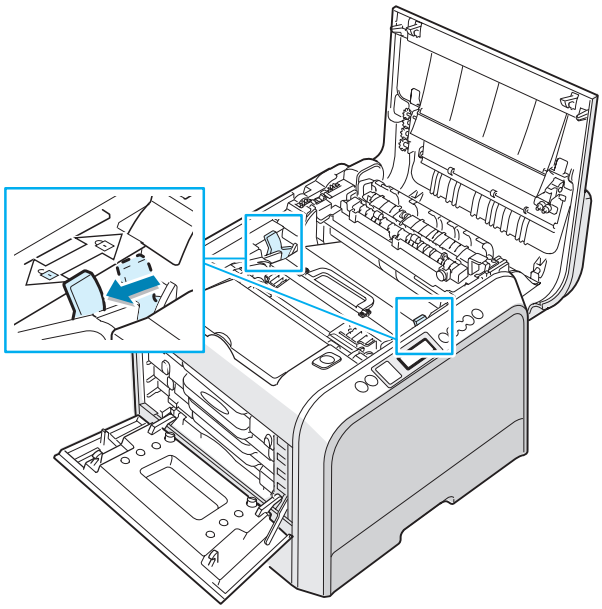


CAUTION: If the left cover is not completely open, the top cover release button does not press.

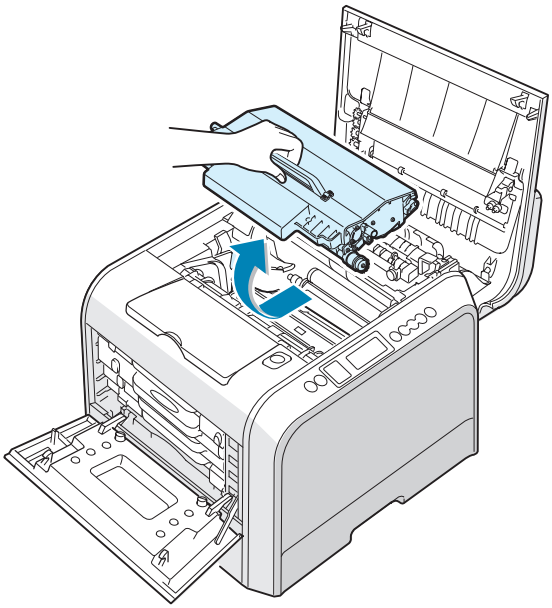
3 Press the top cover release button to unlatch the top cover and open it all the way.



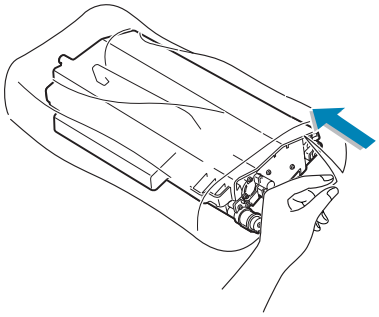
4 Pull the lock levers on each side towards you, as shown below, to release the image transfer unit.



5 Using the handle, lift the used image transfer unit out of the printer by lightly pulling it towards the left of the machine.



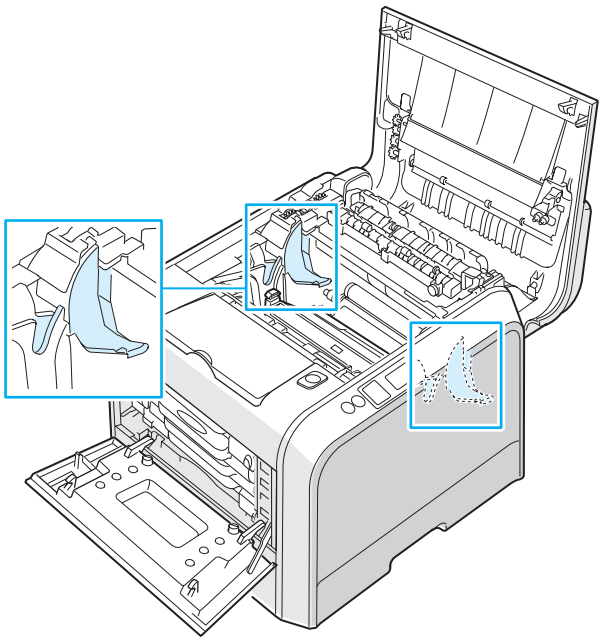
6 Take a new image transfer unit out of the package.



7 Remove the paper covering the image transfer unit by removing the tape under the handle of the image transfer unit.

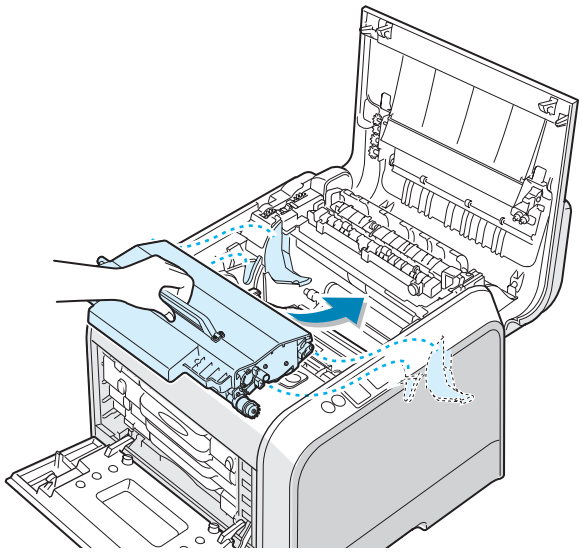
CAUTION: Don't use sharp objects, such as a knife or scissors, to open the image transfer unit package. You could damage the surface of the image transfer.

8 Locate the image transfer unit slots inside the printer, one on each side.



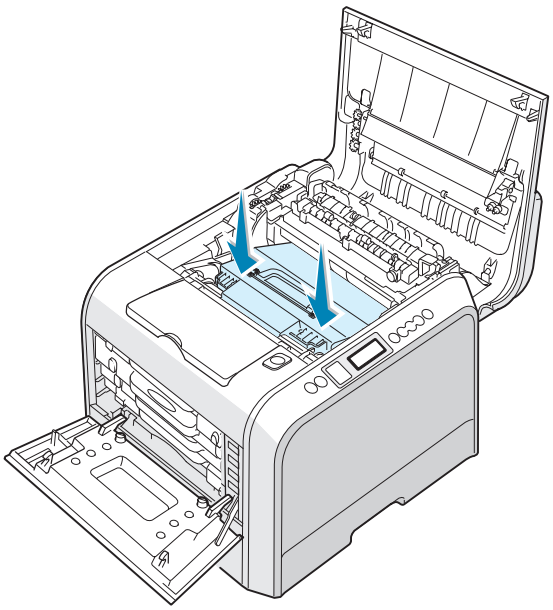
CAUTION: To prevent damage, do not expose the drum cartridge to light for more than a few minutes.

9 Hold the handle on the new image transfer unit and then align it with the slots inside your printer, on each side.

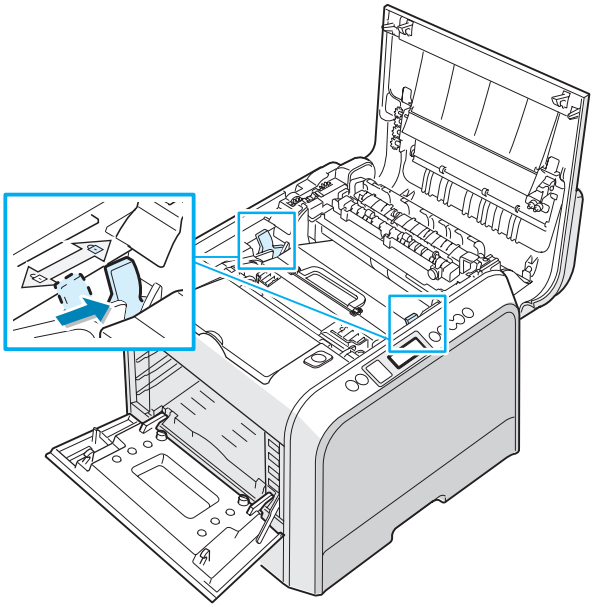


NOTE: Do not turn the transfer unit over. If you do this, the toner may spill.

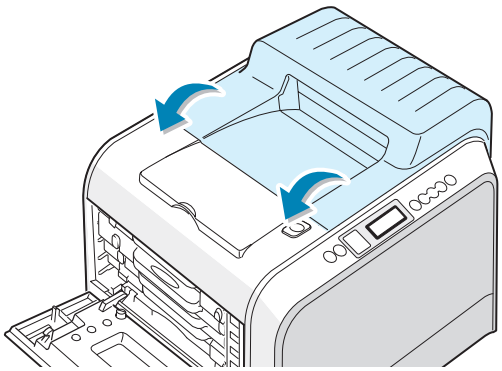
10 Slide the new image transfer unit down into the printer and press it firmly into place.



11 Firmly push the lock levers on each side away from you, as shown below, to lock the image transfer unit into place.

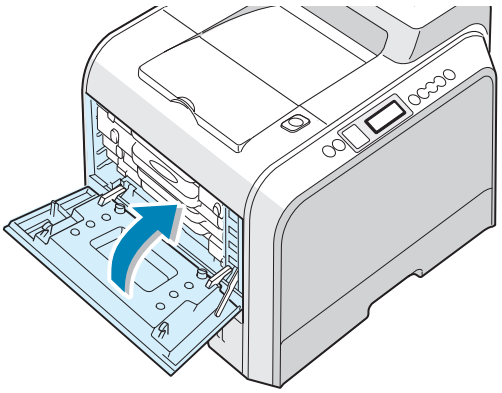


12 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.



CAUTION: Do not try to close the top cover with the left cover closed. This may cause damage to the machine.

13 Close the left cover firmly.



14 Open the front cover and clean the LSU. For details, see page 6.27.

15 Turn the printer on.

16 In ready mode press the **Menu** button (✱) on the control panel until you see 'Setup' on the bottom line of the display.

17 Press the **Enter** button (✱) to access the menu.

18 Press the scroll button (◁ or ▷) until 'Maintenance' displays on the bottom line and press the **Enter** button (✱).

19 Press the scroll button (◁ or ▷) to until 'Check Others' displays on the bottom line and press the **Enter** button (✱).

20 Press the scroll button (◁ or ▷) to display 'Transfer' on the bottom line and press the **Enter** button (✱).

21 Press the scroll button (◁ or ▷) to display 'Reset' and press the **Enter** button (✱).

22 'Reset Now' appears on the bottom line of the display. The image counts of the image transfer unit are set to zero.

Cleaning the Printer

During the printing process, particles of paper, toner and dust can accumulate inside the printer. Over time, this build-up can cause print-quality problems such as toner specks or smearing. Your printer has a cleaning mode that can correct and prevent these types of problems.

Cleaning the Outside of the Printer

Clean the cabinet of the printer with a soft, lint-free cloth. You can dampen the cloth slightly with water, but be careful not to be let any water drip onto the printer or inside of it.

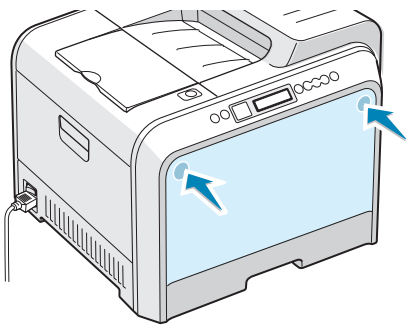
NOTE: While cleaning the inside of the printer, be careful not to touch the transfer roller (located underneath the toner cartridge). Oil from your fingers can cause print quality problems.

CAUTION: Cleaning the cabinet of the printer with cleaners containing large amounts of alcohol, solvent or other strong substances can discolor or crack the cabinet.

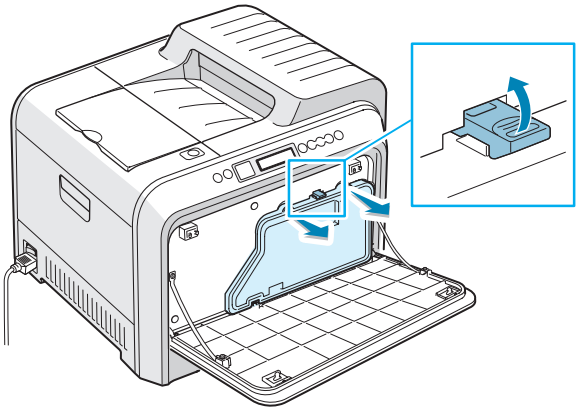
Cleaning the LSU Inside the Printer

NOTE: Clean the LSU when you remove the particles of paper, toner and dust inside the printer. You should also clean it after installing and replacing the supplies.

1. Turn the printer off.
2. To unlatch the front cover, quickly press and release it using the depressions at the top.

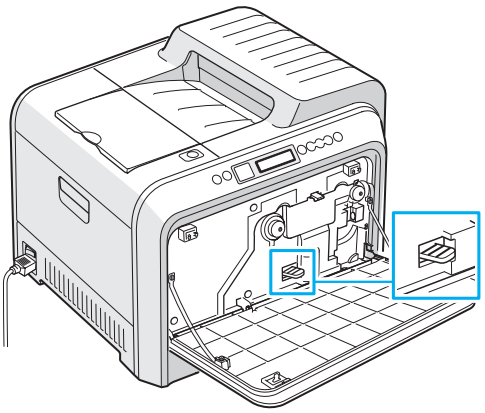


3 Push the lock lever up and pull the waste toner container out.

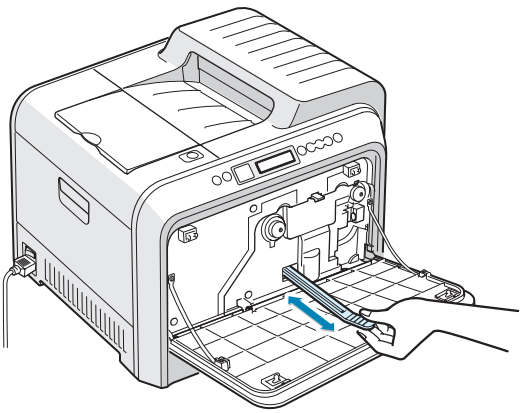


NOTE: Make sure that you lay the waste toner container on a flat surface so that the toner does not spill.

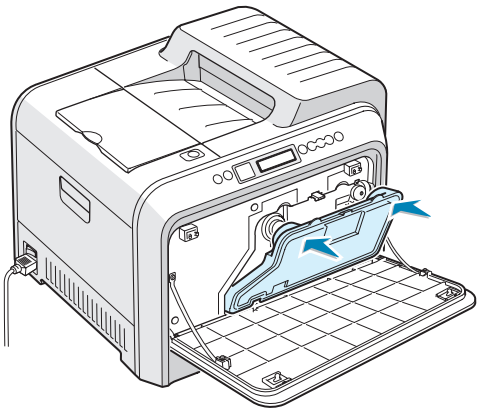
4 Locate the supplied LSU cleaner on the bottom.



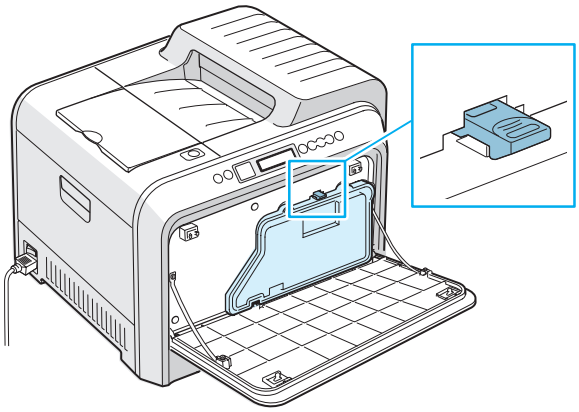
5 Holding the end of the cleaner, slide it in and out several times.



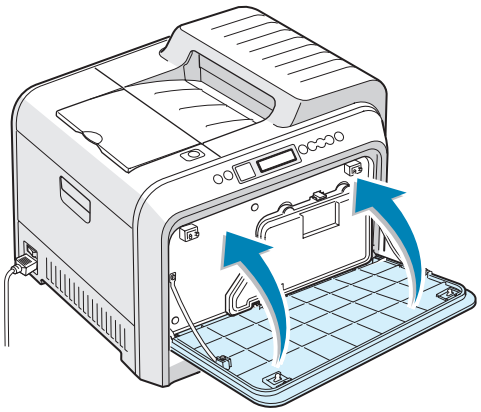
6 Slide the cleaner back into place and then replace the lower of the waste toner container and then push it to make sure that it is seated in place.



7 Make sure that the lock lever latches the container.



8 Close the front cover. Make sure that it is securely latched and then turn the printer on.



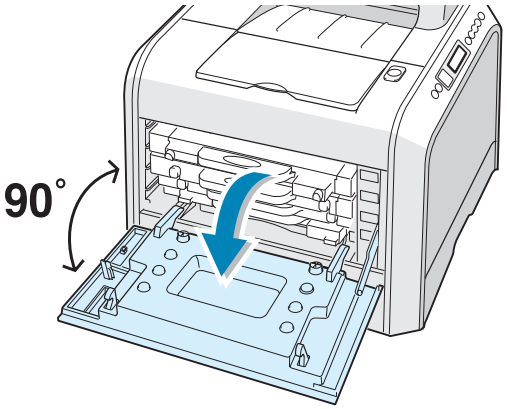
Make sure that the left and right side of the front cover are closed firmly.

Cleaning the Inside of the Printer

NOTE: While cleaning the inside of the printer, be careful not to touch the transfer roller located underneath the toner cartridge. Oil from your fingers can cause print quality problems.

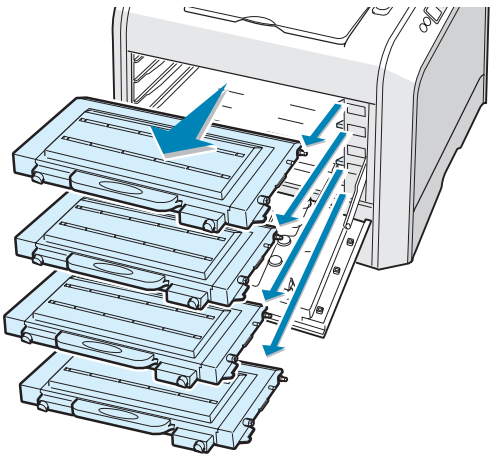
1 Turn the printer off and unplug the power cord, then wait a few minutes for the printer to cool.

2 Using the handle, open the left cover completely.

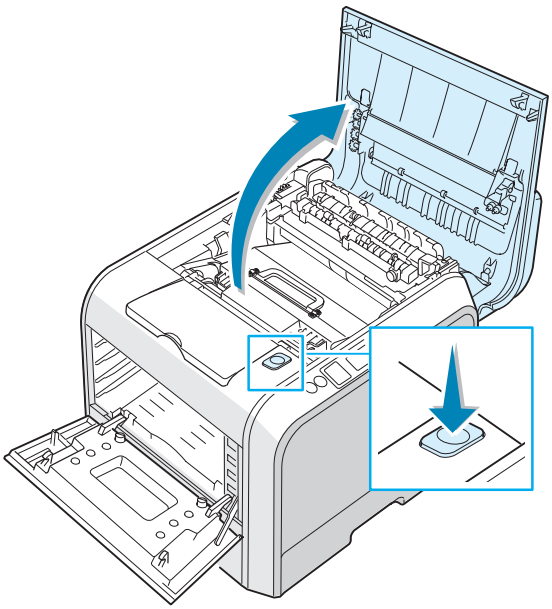


CAUTION: If the left cover is not completely open, the top cover release button does not press.

3 Pull the handle lightly first, and then holding the toner cartridges, remove them from the printer. Set them on a clean flat surface.

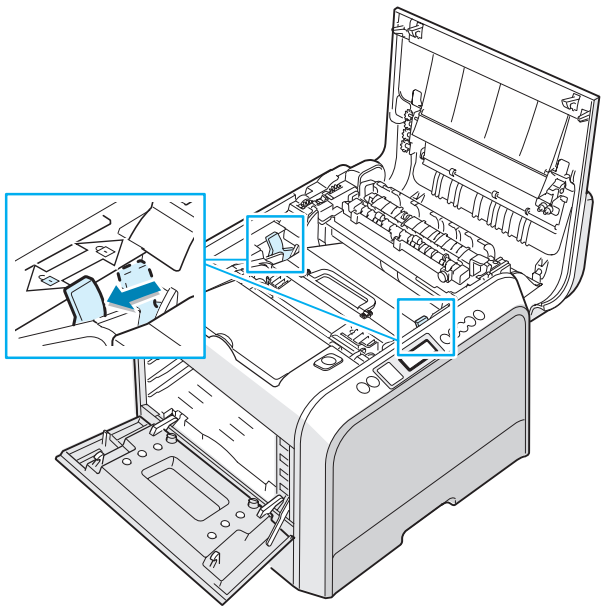


4 Press the top cover release button to unlatch the top cover and open it all the way.

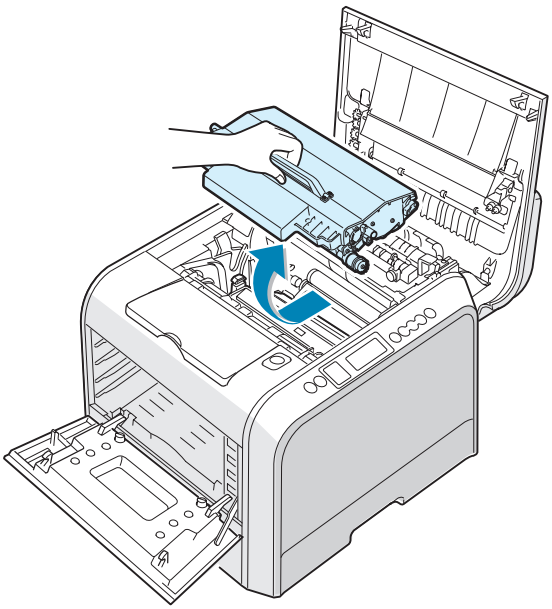


CAUTION: If you open the left cover for a long time, the drum cartridge can be exposed to light. This causes damage to the drum cartridge.

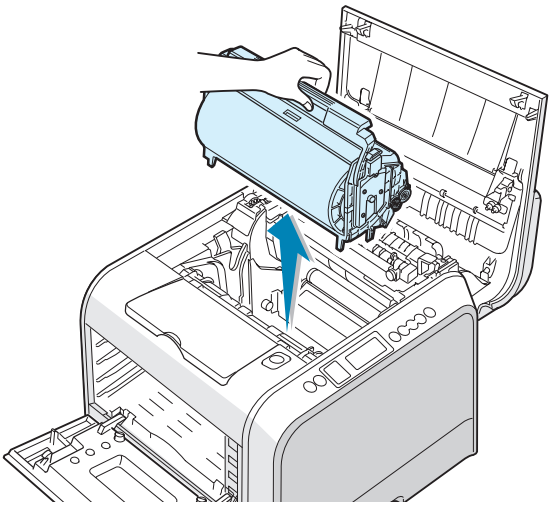
5 Pull the lock levers on each side towards you, as shown below, to release the image transfer unit.



6 Using the handle, lift the image transfer unit out of the printer by lightly pulling it towards the left of the machine. Set it on a clean flat surface.



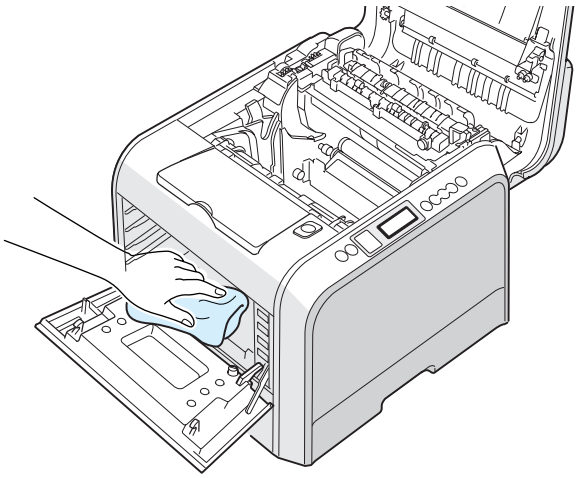
7 Lift the handle of the drum cartridge and use it to pull the drum cartridge out of the printer. Set it on a clean flat surface.



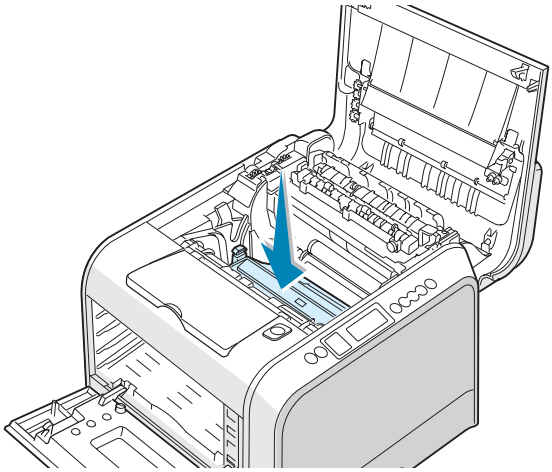
CAUTIONS:

- To prevent damage, do not expose the drum cartridge to light for more than a few minutes. Cover it with black paper, if necessary.
- Do not touch the surface of the green roller on the drum cartridge or print quality problems can occur.

8 Look inside the printer. Remove any dust, paper particles, and spilled toner with a damp, soft lint-free cloth or small vacuum cleaner.

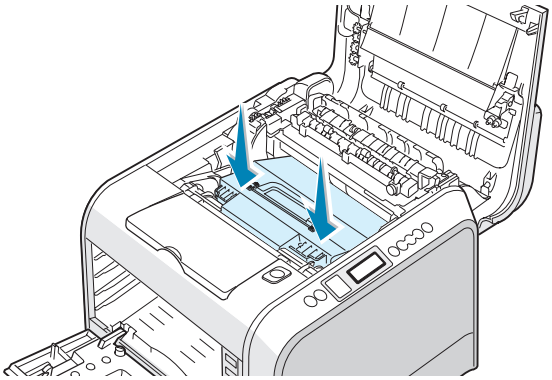


9 Insert the drum cartridge back into the printer. Make sure you hear it click, and then fold the handle down. For details, see steps 9 to 10 on page 6.16.



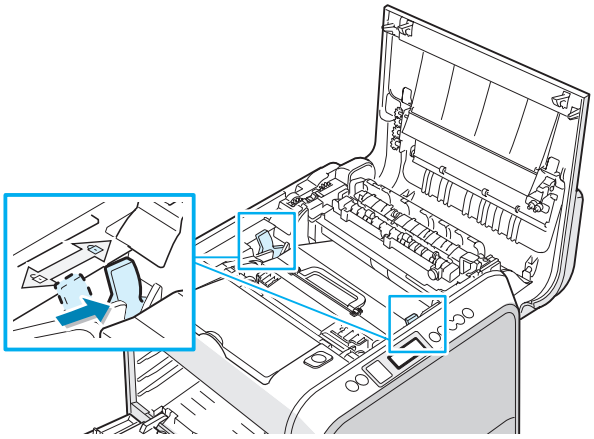
CAUTION: Replace the drum cartridge carefully so as not to scratch and damage the surface of the green roller on the drum cartridge.

10 Insert the image transfer unit back into the printer. Press it firmly to make sure it fits into place. For details, see steps 7 and 8 on page 6.23.

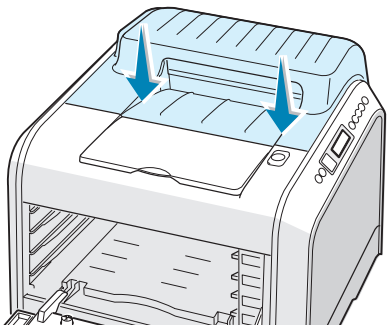


NOTE: Do not turn the transfer unit over. If you do this, the toner may spill.

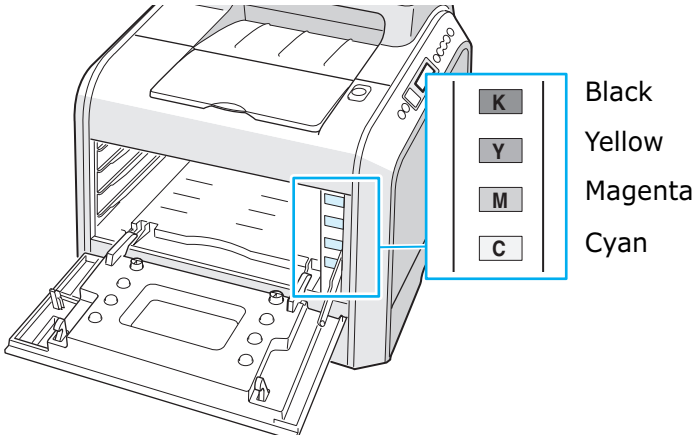
11 Firmly push the lock levers on each side away from you, as shown below, to lock the image transfer unit into place.



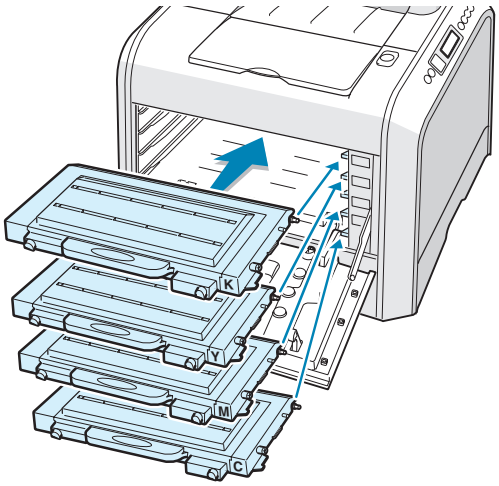
12 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.



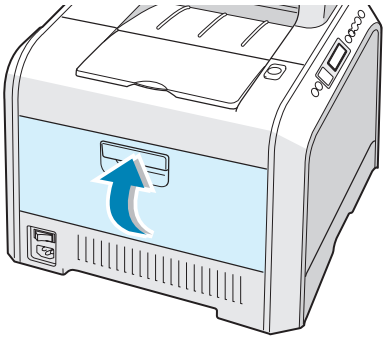
13 Look inside the printer on the right and then locate the color of the toner cartridges that matches the color of the slot.



14 Holding each toner cartridge, insert them into their corresponding positions in order of Cyan, Magenta, Yellow and then Black.



15 Close the left cover. Make sure that it is securely latched.



16 Plug the power cord in and turn the printer on.

Consumables and Replacement Part

From time to time, you will need to replace the toner cartridge, roller, and fuser unit to maintain top performance and avoid print quality problems and paper feed problems resulting from worn parts.

The following items should be replaced after you have printed a specified number of pages. See the table below.

Item(s)	Yield (Average)
Pick-up roller	100,000 pages
Transfer 2 roller	50,000 pages
Fuser unit	10,000 (mono) pages 50,000 (color) pages

To purchase the consumables and replacement parts, contact your Samsung dealer or the retailer where you bought your machine. We strongly recommend that items be installed by a trained service professional, except for the toner cartridge.

7 Solving Problems

This chapter provides helpful information for what to do if you encounter an error while using your printer.

This chapter includes:

- **Troubleshooting Checklist**
- **Solving General Printing Problems**
- **Clearing Paper Jams**
- **Solving Print Quality Problems**
- **Understanding Display Messages**
- **Common Windows Problems**
- **Common Macintosh Problems**
- **Common Linux Problems**

Troubleshooting Checklist

If the printer is not working properly, consult the following checklist. If the printer does not pass a step, follow the corresponding troubleshooting suggestions.

Check	Solution
Make sure that the **On-Line/Continue** button on the control panel is green and "Ready" is shown on the display.	• If the button backlight is off, check the power cord connection. Check the power switch. Check the power source by plugging it into another outlet. • If the button backlight is orange, check the display message and go to "Understanding Display Messages" on page 7.24.
Print a demo page to verify that the printer is feeding paper correctly. See the Setup Guide.	• If a demo page does not print, check the paper supply in the paper tray. • If the paper jams in the printer, go to "Clearing Paper Jams" on page 7.6. • If an error message appears on the display, go to "Understanding Display Messages" on page 7.24.
Check the demo page to see if it is printed correctly.	If there is a print quality problem, go to "Solving Print Quality Problems" on page 7.20.
Print a short document from a software application to verify that the computer and printer are connected and are communicating correctly.	• If the page does not print, check the cable connection between the printer and the computer. • Check the print queue or print spooler to see if the printer has been paused. • Check the software application to ensure that you are using the proper printer driver and communication port. If the page is interrupted during printing, go to "Solving General Printing Problems" on page 7.3.
If completing the checklist does not resolve the printer problem, check the following troubleshooting sections.	• See "Solving General Printing Problems" on page 7.3. • See "Understanding Display Messages" on page 7.24. • See "Common Windows Problems" on page 7.28. • See "Common Macintosh Problems" on page 7.29 • See "Common Linux Problems" on page 7.30.

Solving General Printing Problems

For problems with the operation of your printer, refer to the table for suggested solutions.

Problem	Possible Cause	Solution
The printer does not print.	The printer is not receiving power.	Check the power cord connections. Check the power switch and the power source.
	The printer is not selected as the default printer.	Select **Samsung CLP-500 Series** as your default printer.
	Check the printer for the following: • The printer cover is not closed. • Paper is jammed. • No paper is loaded. • The toner cartridge is not installed.	Solve the problems.
	The printer may be in manual feed mode and out of paper.	Check the display message, add paper to the Multi-purpose Tray and press the **On-Line/Continue** button on the printer's control panel.
	The connection cable between the computer and the printer is not connected properly.	Disconnect the printer cable and reconnect it.
	The connection cable between the computer and the printer is defective.	If possible, attach the cable to another computer that is working properly and print a document. You can also try using a different printer cable.
	The port setting is incorrect.	Check the Windows printer setting to make sure that the print job is sent to the correct port, for example, LPT1. If the computer has more than one port, make sure that the printer is attached to the correct one.
	The printer may be configured incorrectly.	Check the printer properties to ensure that all of the print settings are correct.
	The printer driver may be incorrectly installed.	Reinstall the printer driver; refer to the Setup Guide. Try printing a demo page.
	The printer is malfunctioning.	Check the display message on the control panel to determine if the printer is indicating a system error.

Problem	Possible Cause	Solution
Printer selects print materials from the wrong paper source.	The paper source selection in the printer properties may be incorrect.	For many software applications, the paper source selection is found under the **Paper** tab within the printer properties. Select the correct paper source. See page 3.7.
Paper does not feed into the printer.	Paper has been loaded incorrectly.	Remove paper from the tray and reload it correctly.
	There is too much paper in the paper tray.	Remove excess paper from the tray.
	The paper is too thick.	Use only paper that meets the specifications required by the printer.
Print job is extremely slow.	The job may be very complex.	Reduce the complexity of the page or try adjusting the print quality settings. Your printer prints A4-size paper at 20 ppm for black, Letter-size paper at 21 ppm or A4/Letter-sized at 5 ppm for color.
	If using Windows 9x/ Me, the Spooling Setting may be set incorrectly.	From the **Start** menu, choose **Settings** and **Printers**. Right-click the **Samsung CLP-500 Series** printer icon, choose **Properties**, click the **Details** tab, and then choose the **Spool Settings** button. Select the desired spool setting.
	The computer may have insufficient random-access memory (RAM).	Install more memory in your printer. See "Installing Printer Memory" on page D.2.
Half the page is blank.	The page orientation setting may be incorrect.	Change the page orientation in your application. See page 3.6.
	The paper size and the paper size settings do not match.	Ensure that the paper size in the printer driver settings matches the paper in the tray.
The paper keeps jamming.	There is too much paper in the paper tray.	Remove excess paper from the tray. If printing on special materials, use the Multi-purpose Tray.
	An incorrect type of paper is being used.	Use only paper that meets the specifications required by the printer. If printing on special materials, use the Multi-purpose Tray.
	There may be debris inside the machine.	Open the top cover and remove the debris.

Problem	Possible Cause	Solution
The printer prints, but the text is wrong, garbled, or incomplete.	The printer cable is loose or defective.	Disconnect the printer cable and reconnect. Try a print job that you have already printed successfully. If possible, attach the cable and printer to another computer and try a print job that you know works. Finally, try a new printer cable.
	The wrong printer driver was selected.	Check the application's printer selection menu to ensure that your printer is selected.
	The software application is malfunctioning.	Try printing a job from another application.
	The operating system is malfunctioning.	Exit Windows and reboot the computer. Turn the printer off and then back on again.
Pages print, but are blank.	The toner cartridge is defective or out of toner.	Redistribute the toner. If necessary, see page 6.5. If necessary, replace the toner cartridge.
	The file may have blank pages.	Check the file to ensure that it does not contain blank pages.
	Some parts, such as the controller or the board, may be defective.	Contact a service representative.
The illustrations print incorrectly in Adobe Illustrator.	The setting in the software application is wrong.	Select **Download as Bit Image** in the **Advanced Options** window of the graphic properties. Print the document.

Clearing Paper Jams

The display on the control panel tells you where a paper jam occurs. Refer to the table below to locate the paper jam and to clear it:

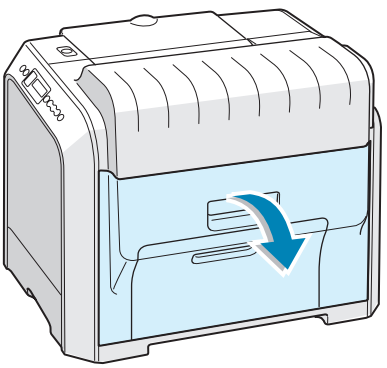
Message	Location of Jam	Go to...
Jam0 In Tray1	In the paper feed area	below
Jam0 In Tray2	In the optional tray 2	page 7.8
Jam Inside Printer	Inside printer	page 7.9
Jam In Exit Area	In the paper exit area	page 7.10
Jam In Duplex Path	In the duplex area	page 7.13
Jam0 In MP Tray	In the multi-purpose tray	page 7.16

To resume printing after clearing paper jams, you must open and close the right cover.

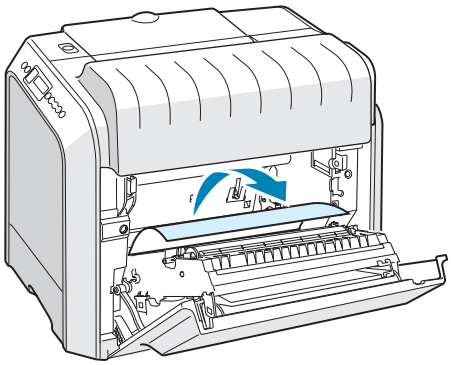
In the Paper Feed Area

If paper is jammed in the paper feed area, 'Jam0 In Tray1' appears on the display.

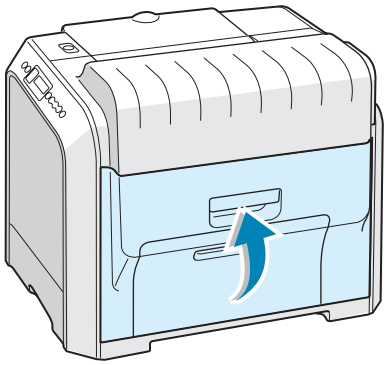
1 Using the handle, open the right cover.



2 Carefully remove the misfed paper in the direction as shown.

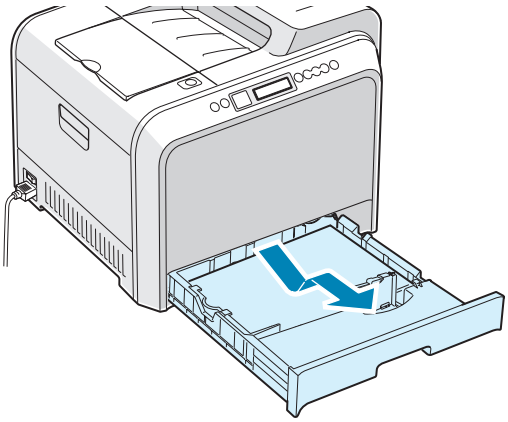


3 Close the right cover. The printer resumes printing.

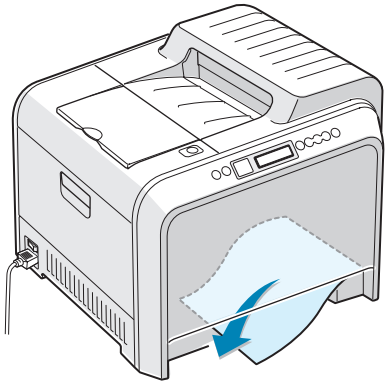


If there is any resistance, and the paper does not move immediately when you pull, stop pulling and go to step 4.

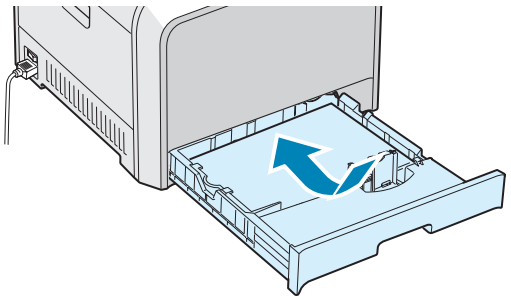
4 Pull the tray open. After you pull it all the way out, lift up the front part of the tray slightly to release the tray from the machine.



5 Remove the jammed paper by gently pulling it straight out.



6 To replace the tray, lower the rear edge, align it to the slot and slide it into the printer.

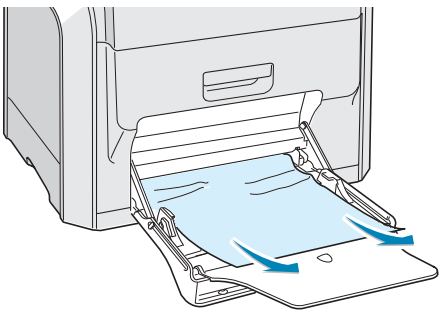


7 Close the right cover. The printer resumes printing.

In the Multi-purpose Tray

'Jam0 In MP Tray' appears on the display when you print using the Multi-purpose Tray and the printer detects either there is no paper or the paper is improperly loaded.

If the paper is not feeding properly, pull the paper out of the machine.

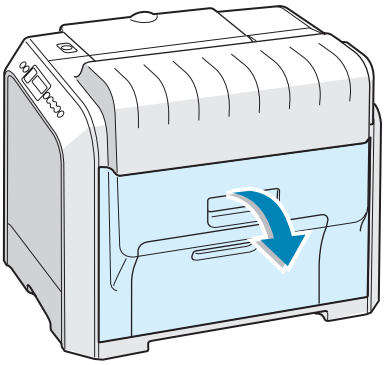


To resume printing, open and close the right cover.

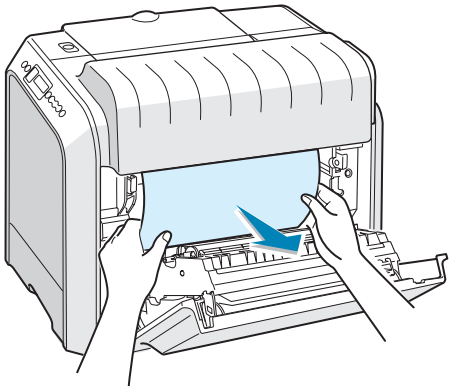
Inside the Printer

If paper is jammed inside the printer, 'Jam Inside Printer' appears on the display.

1 Using the handle, open the right cover.



2 Remove the jammed paper, in the direction shown. To avoid the paper tearing, pull it out gently and slowly.



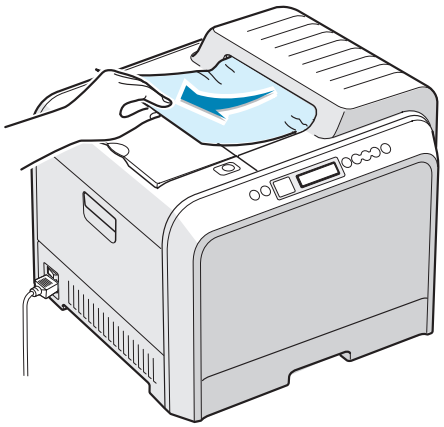
NOTE: If the paper tears, make sure that all of the paper fragments are removed from the printer.

3 Close the right cover. The printer resumes printing.

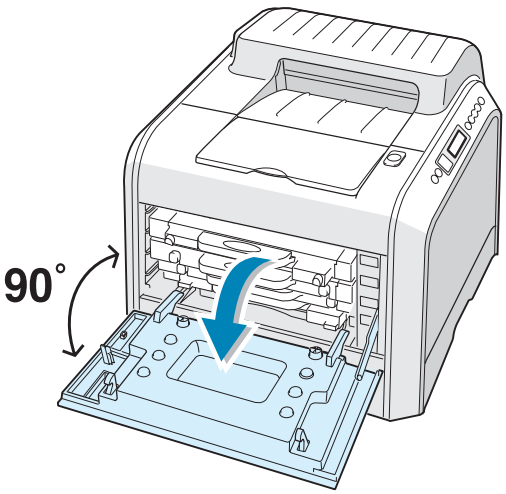
In the Paper Exit Area

If paper is jammed in the paper exit area, 'Jam In Exit Area' appears on the display.

1 If a long portion of the paper is visible, pull it straight out. If not, continue to step 2.

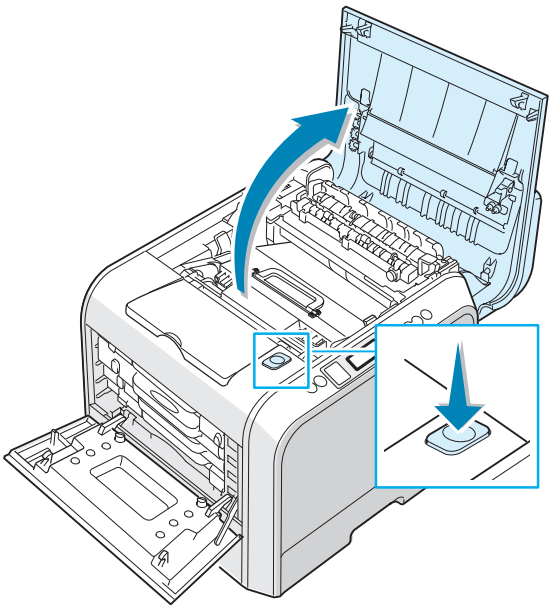


2 Using the handle, open the left cover completely.

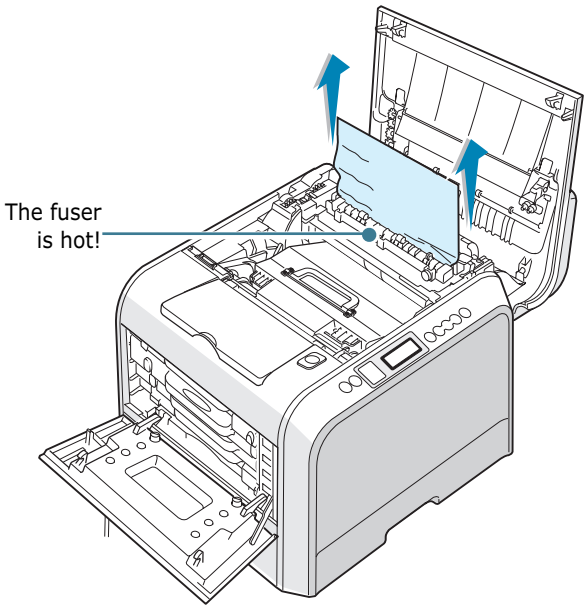


CAUTION: If the left cover is not completely open, the top cover release button does not press.

3 Press the top cover release button to unlatch the top cover and open it all the way.

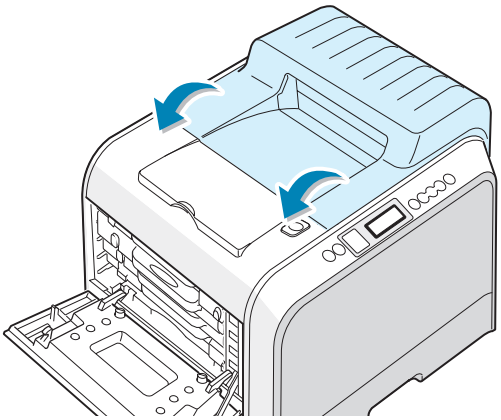


4 Carefully take the jammed paper out of the printer.



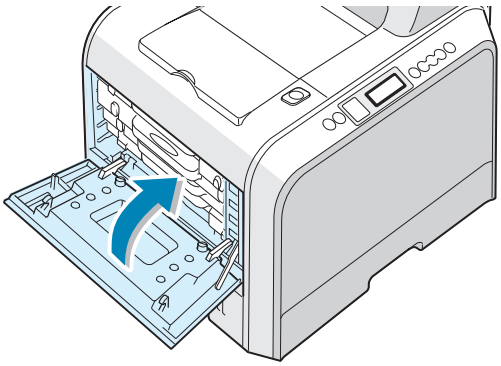
CAUTION: Do not touch the fuser. It is hot and could cause burns! The fuser's operating temperature is 180°C (356° F). Take care when removing paper from the machine.

5 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.

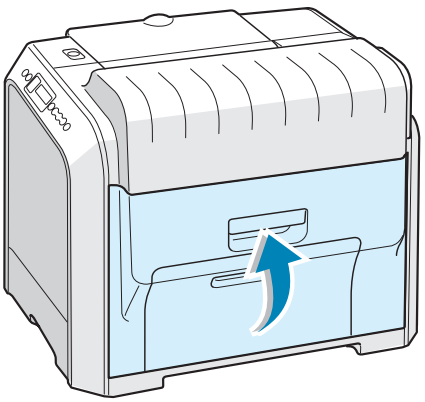


CAUTION: Do not try to close the top cover with the left cover closed. This may cause damage to the machine.

6 Close the left cover firmly.



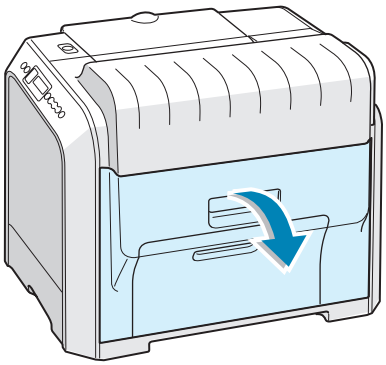
7 Open and close the right cover to resume printing.



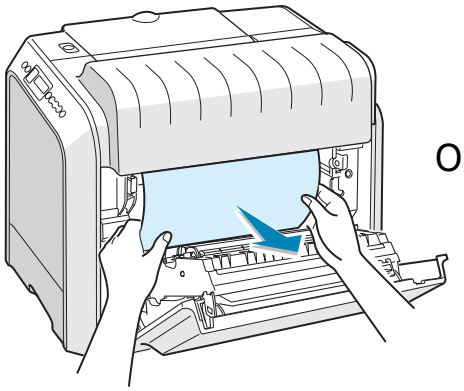
In the Duplex Area

If paper is jammed in the duplex area, 'Jam In Duplex Path' appears on the display.

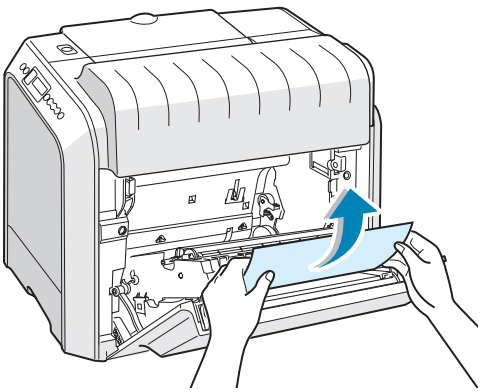
1 Using the handle, open the right cover.



2 Locate the jammed paper, and then pull it out gently and slowly to avoid the paper tearing. Go to step 9.



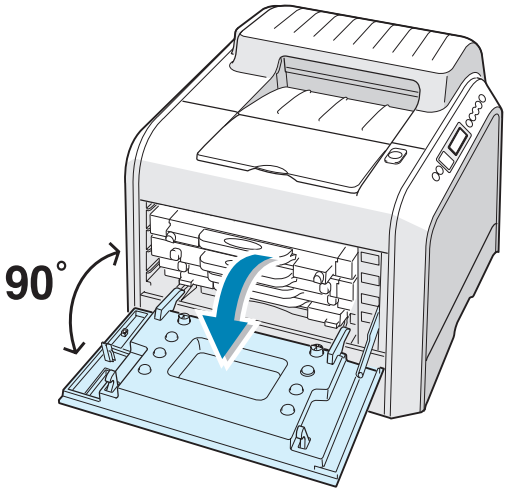
OR



NOTE: If the paper tears, make sure that all of the paper fragments are removed from the printer.

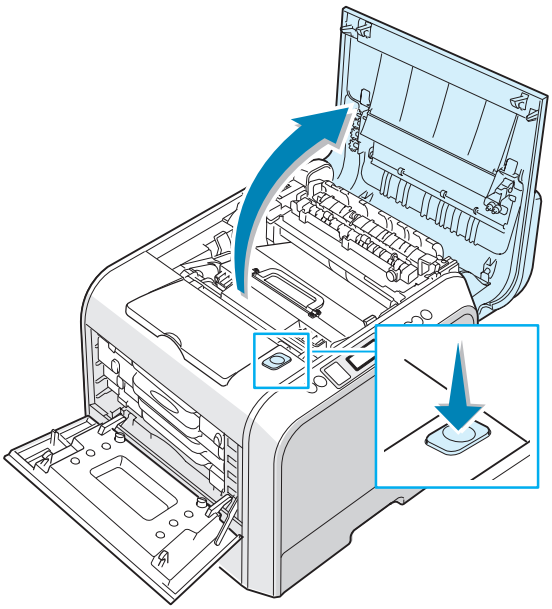
3 If you cannot find the jammed paper or there is any resistance removing the paper, go to step 4.

4 Using the handle, open the left cover completely.

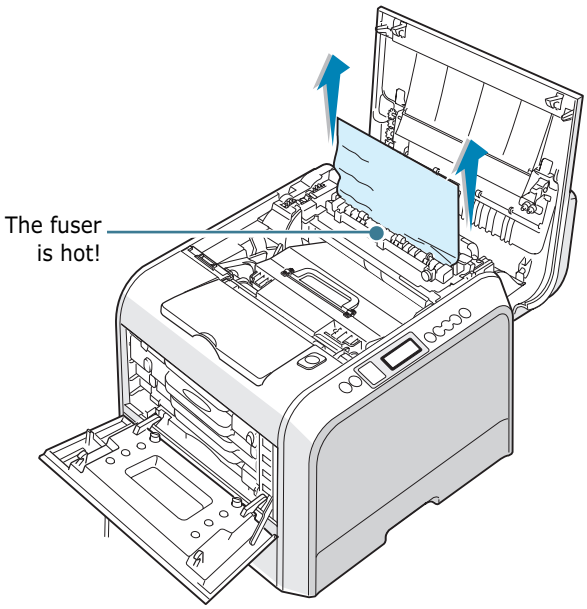


CAUTION: If the left cover is not completely open, the top cover release button does not press.

5 Press the top cover release button to unlatch the top cover and open it all the way.

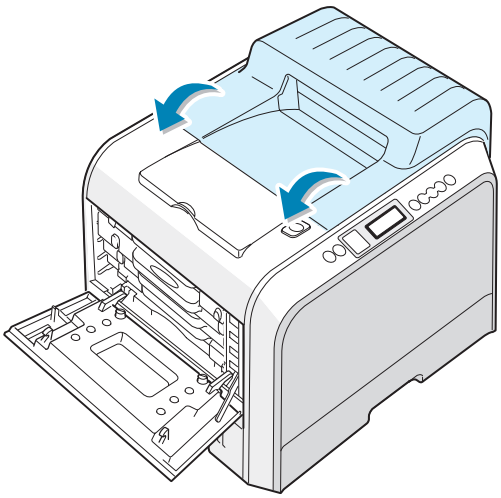


6 Locate the jammed paper, and then carefully take it out of the printer.



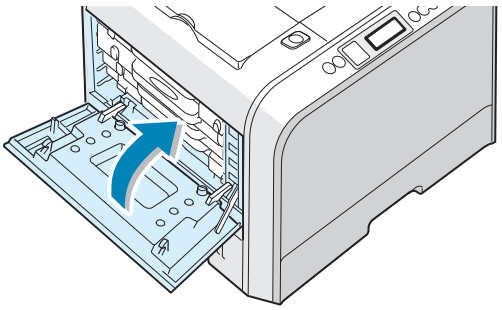
CAUTION: Do not touch the fuser. It is hot and could cause burns! The fuser's operating temperature is 180°C (356°F). Take care when removing paper from the machine.

7 After making sure that the left cover is open, close the top cover. Make sure that it is securely latched.



CAUTION: Do not try to close the top cover with the left cover closed. This may cause damage to the machine.

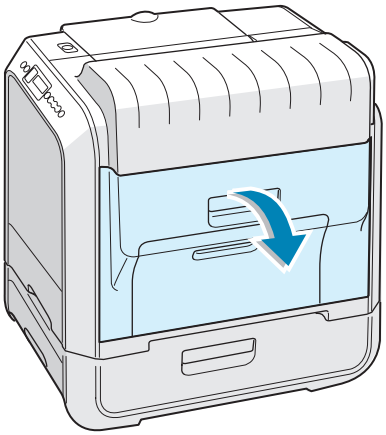
8 Close the left cover firmly.



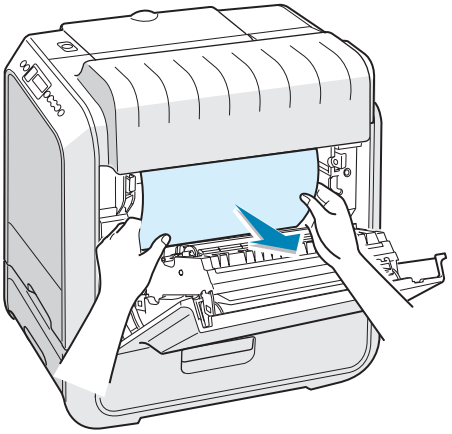
9 Close the right cover. The printer resumes printing.

In the Optional Tray2

1 Using the handle, open the right cover.

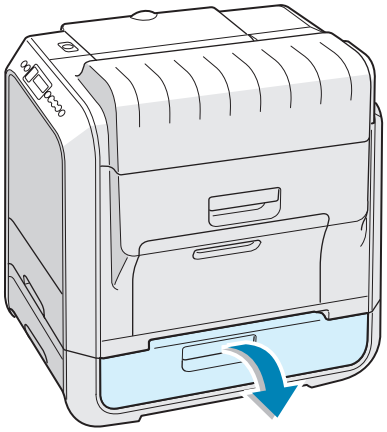


2 Remove the jammed paper in the direction shown. To avoid the paper tearing, pull it out gently and slowly.

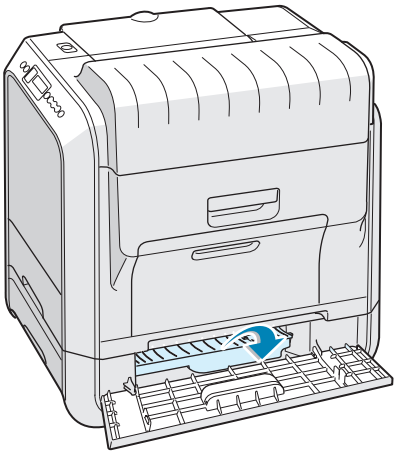


3 Close the right cover. The printer resumes printing.

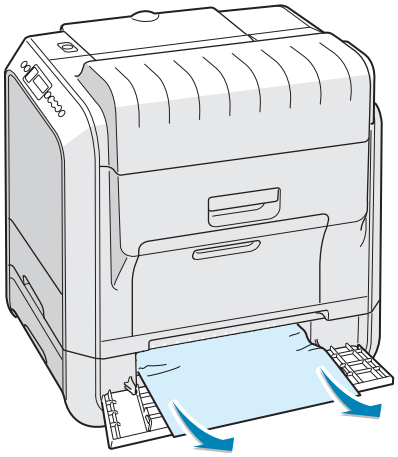
4 If you cannot find the jammed paper in the machine, open the outer jam cover in Tray 2.



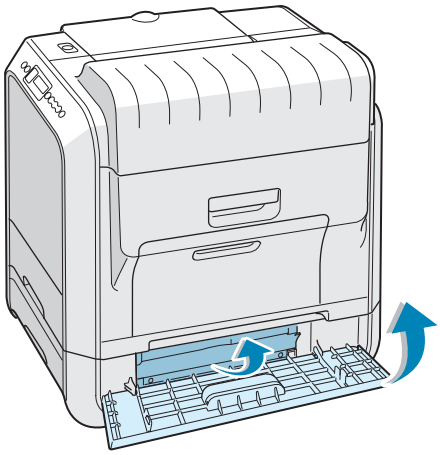
5 Open the inner cover of Tray 2.



6 Pull the jammed paper out in the direction shown. To avoid the paper tearing, pull it out gently and slowly.

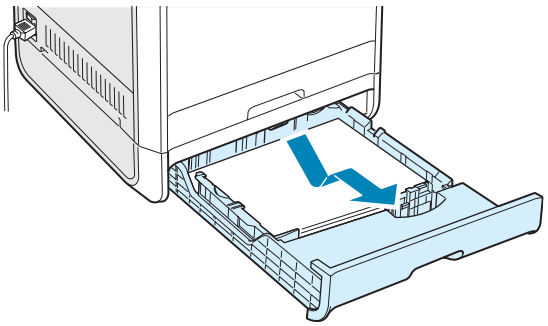


7 Close the two jam covers. Go to step 11.

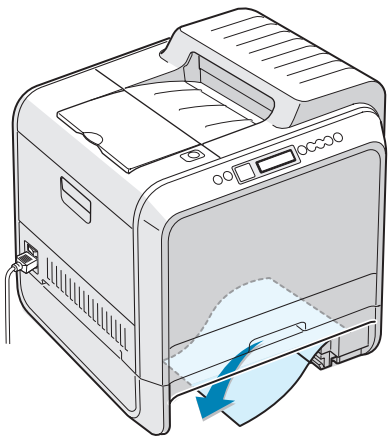


If there is any resistance, and paper does not move immediately when you pull, stop pulling and continue to step 8.

8 Pull the optional tray, Tray 2, out of the printer.

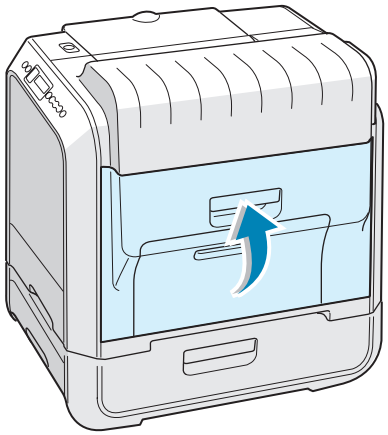


9 If you see the jammed paper, remove the paper from the machine by gently pulling it straight out.



10 Slide the tray back into the printer and close the two jam covers.

11 Open and close the right cover. The printer resumes printing.



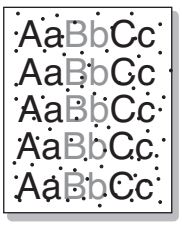
Tips for Avoiding Paper Jams

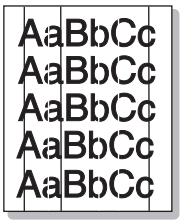
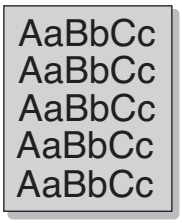
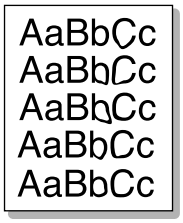
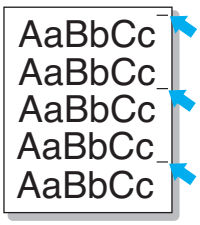
By selecting the correct paper types, most paper jams can be avoided. If a paper jam occurs, follow the steps outlined in "Clearing Paper Jams" on page 7.6.

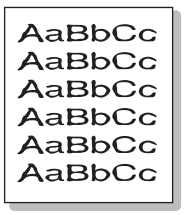
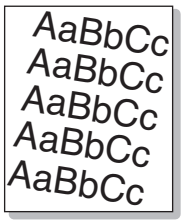
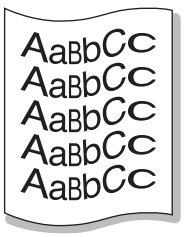
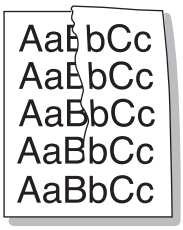
- Follow the procedures on page 2.4. Ensure that the adjustable guides are positioned correctly.
- Do not overload the paper tray. Ensure that the paper is below the paper limit mark on the inside wall of the tray.
- Do not remove the paper from the tray while printing.
- Flex, fan and straighten the paper before loading.
- Do not use creased, damp or highly curled paper.
- Do not mix paper types in the tray.
- Use only recommended print materials. See "Paper Specifications" on page E.3.
- Ensure that the print side is facing down when loading paper in the tray and in the Multi-purpose Tray.

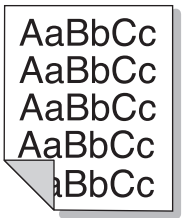
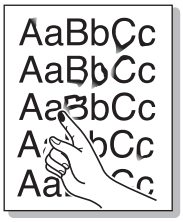
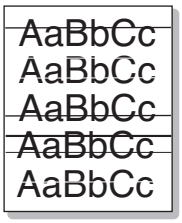
Solving Print Quality Problems

Dirt inside of the printer or improper paper loading may reduce the print quality. See the table below to troubleshoot the problem.

Problem	Solution
Light or faded print 	If a vertical white streak or faded area appears on the page: • The toner supply is low. You may be able to temporarily extend the toner cartridge life. See "Redistributing the Toner" on page 6.5. If this does not improve the print quality, install a new toner cartridge. • The paper may not meet paper specifications (for example, the paper is too moist or too rough). See "Paper Specifications" on page E.3. • A combination of faded or smeared defects may indicate that the toner cartridge needs cleaning. See page 6.30. • The surface of the LSU may be dirty. Clean the LSU. See page 6.27.
Toner specs 	• The paper may not meet specifications (for example, the paper is too moist or too rough). See "Paper Specifications" on page E.3. • The transfer roller or the paper path may be dirty. See "Cleaning the Inside of the Printer" on page 6.30.
Dropouts 	If generally rounded, faded areas occur randomly on the page: • A single sheet of paper may be defective. Try reprinting the job. • The moisture content of the paper is uneven or the paper has moist spots on its surface. Try a different brand of paper. See "Paper Specifications" on page E.3. • The paper lot is bad. The manufacturing process can cause some areas to reject toner. Try a different kind or brand of paper. • The toner cartridge may be defective. See "Vertical repetitive defects" on the next page. • If these steps do not correct the problems, contact a service representative.

Problem	Solution
Vertical lines 	If black vertical streaks appear on the page: • The drum inside the machine has probably been scratched. Install a new drum cartridge. If white vertical lines appear on the page: • The Laser Scanner window has probably been contaminated, clean the Laser Scanner window. Holding the end of the cleaner, slide it in and out several times. See "Cleaning the LSU Inside the Printer" on page 6.27.
Gray background 	If the amount of background shading becomes unacceptable, the procedures below may fix the problem. • Change to lighter weight pages. See "Paper Specifications" on page E.3. • Check the printer's environment; very dry (low humidity) or high humidity (higher than 80% RH) conditions can increase the amount of background shading. • Remove the old drum cartridge and install a new one. See "Replacing the Drum Cartridge" on page 6.13.
Toner smear 	• Clean the inside of the printer. See "Cleaning the Inside of the Printer" on page 6.30 • Check the paper type and quality. See "Paper Specifications" on page E.3. • Remove the toner cartridge and install a new one. See "Replacing the Toner Cartridges" on page 6.7.
Vertical repetitive defects 	If marks repeatedly appear on the printed side of the page at even intervals: • Clean the inside of the printer. See "Cleaning the Inside of the Printer" on page 6.30. After cleaning the inside of the printer, if you still have the same problems, install a new toner cartridge. See "Replacing the Toner Cartridges" on page 6.7. • Parts of the printer may have toner on them. If the defects occur on the back of the page, the problem will likely correct itself after a few more pages. • The fusing assembly may be damaged. Contact a service representative.

Problem	Solution
Background scatter 	Background scatter results from bits of toner distributed on the printed page. • The paper may be too damp. Try printing with a different batch of paper. Do not open packages of paper until necessary so that the paper does not absorb too much moisture. • If background scatter occurs on an envelope, change the printing layout to avoid printing over areas that have overlapping seams on the reverse side. Printing on seams can cause problems. • If background scatter covers the entire surface area of a printed page, adjust the print resolution through your software application or the printer properties.
Misformed characters 	• If characters are improperly formed and producing hollow images, the paper stock may be too slick. Try a different paper. See "Paper Specifications" on page E.3. • If characters are improperly formed and producing a wavy effect, the scanner unit may need service. Verify that it also occurs on a demo page. Refer to the Setup Guide. For service, contact a service representative.
Page skew 	• Check the paper type and quality. See "Paper Specifications" on page E.3. • Ensure that the paper or other material is loaded correctly and the guides are not too tight or too loose against the paper stack.
Curl or wave 	• Check the paper type and quality. Both high temperature and humidity can cause paper curl. See "Paper Specifications" on page E.3. • Turn the stack of paper over in the tray. Also try rotating the paper 180° in the tray.
Wrinkles or creases 	Ensure that the paper is loaded properly. • Check the paper type and quality. See "Paper Specifications" on page E.3. • Turn the stack of paper over in the paper tray. Also try rotating the paper 180° in the tray.

Problem	Solution
Back of printouts are dirty 	• The transfer roller may be dirty. See "Cleaning the Inside of the Printer" on page 6.30. • Check for leaking toner. Clean the inside of the printer.
Black pages 	• The drum cartridge may not be installed properly. Remove the drum cartridge and reinsert. • The drum cartridge may be defective and need replacing. Install a new drum cartridge. • The printer may require repair. Contact a service representative.
Loose toner 	Clean the inside of the printer. • Check the paper type and quality. See "Paper Specifications" on page E.3. • Install a new toner cartridge. See "Replacing the Toner Cartridges" on page 6.7. • If the problem persists, the printer may require repair. Contact a service representative.
Character Voids 	Character voids are white areas within the parts of characters that should be solid black: • If you are using transparencies, try another type of transparency. Due to the composition of the transparency, some character voids are normal. • You may be printing on the wrong surface on the paper. Remove the paper and turn it around. • The paper may not meet paper specifications. See page E.3.
Horizontal stripes 	If horizontally aligned black streaks or smears appear: • The drum cartridge may be installed improperly. Remove the drum cartridge and reinsert. • The drum cartridge may be defective. Install a new drum cartridge. See "Replacing the Drum Cartridge" on page 6.13. • If the problem persists, the printer may require repair. Contact a service representative.

Understanding Display Messages

Messages appear on the display on the control panel to indicate the printer's status or errors. Refer to the tables below to understand the message's meaning and correct the problem if necessary. Messages and their meanings are listed in alphabetical order.

NOTE: When you call for service, it is very helpful to tell the service representative the dispaly message.

Message	Status	Do this...
ADC Not Confirm Error	A problem has occurred in the ADC in the printer.	Contact a service representative.
Cover Open	The top cover is open.	Close the top cover firmly.
Dev. Motor Error	A problem has occurred in the development motor of the printer.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Engine Fuser Error	A problem has occurred in the fuser.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Engine Fuser Low Heat Error	The temperature in the fuser is abnormally low.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Engine Fuser Over Heat Error	The temperature in the fuser is abnormally high.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Engine LSU Error	A problem has occurred in the LSU (Laser Scanning Unit) in the printer.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Image Transfer Error	The image transfer unit is either not working or not correctly installed in the printer.	Replace the image transfer unit. OR Make sure the installed image transfer unit is properly seated.
Invalid Drum Cartridge	An invalid drum cartridge is installed.	Only install a Samsung-approved drum cartridge, designed for your printer.

Message	Status	Do this...
Invalid Image Transfer	An invalid image transfer unit is installed.	Only install a Samsung-approved image transfer unit, designed for your printer.
Invalid New Toner [Color]	An invalid new toner cartridge is installed.	Only install a Samsung-approved toner cartridge, designed for your printer. If you install an approved toner cartridge, contact a service provider.
Invalid Toner [Color]	An invalid toner cartridge is installed.	Only install a Samsung-approved toner cartridge, designed for your printer.
Jam0 In [Tray]	A paper jam has occurred from the indicated tray.	Remove the jammed paper from the corresponding tray, referring to page 7.6.
Jam In Duplex Path	A paper jam has occurred while printing on both sides of the paper.	Remove the jammed paper from the printer, referring to page 7.13.
Jam In Exit Area	A paper jam has occurred in the paper exit area.	Remove the jammed paper from the printer, referring to page 7.10.
Jam Inside Printer	A paper jam has occurred inside the printer.	Open the right cover and remove the jammed paper from the printer, referring to page 7.9.
Load Manual Press Cont Key	The Multi-purpose Tray is empty in the manual feed mode.	Load a sheet of print material and press the **On-Line/Continue** button. You need to press the button for each page to be printed.
Load [Size] In [Tray]	The paper size specified in the printer properties does not match the paper you are loading.	Load the correct paper in the tray.
Main Motor Error	A problem has occurred in the main motor of the printer.	Unplug the power cord and plug it in again. If the problem persists, please call for service.
Memory Overflow	The printer does not have enough memory to print the current job. An error has occurred in the firmware program of the printer.	The job automatically clears and the printer returns to Standby Mode. • Expand the memory in your printer. See "Installing Printer Memory" on page D.2.

Message	Status	Do this...
Page Too Complex	Too much complicated data was sent to the printer.	Simplify the page layout and remove unnecessary graphics from your document. To expand the memory in your printer, see "Installing Printer Memory" on page D.2.
Ready IP Conflict	An IP address conflicts with only other devices on the network.	Contact a service representative and choose an address within your subnet which will not conflict with any other devices.
Ready [CMYK] Low Toner	The corresponding toner cartridge in your printer is nearly empty.	Redistribute the toner in corresponding toner cartridge, referring to page 6.5.
Replace Drum Cartridge	The drum cartridge is either not installed in the printer or is empty.	Install the drum cartridge. OR Replace the drum cartridge with a new one. See page 6.13.
Replace Image Transfer	The image transfer unit is not installed in the printer or is empty.	Install the image transfer unit. OR Replace the image transfer unit with a new one. See page 6.21.
Replace Toner [Color]	The indicated color toner cartridge is not installed in the printer or is empty.	Install the corresponding color toner cartridge. OR Replace the corresponding toner cartridge with a new one. See page 6.7.
Press Cont Key Replace Cart	The level of the toner in the toner cartridge is low and printing stops until you press the **On-Line/Continue** button.	• To continue printing, press the **On-Line/Continue** button. • When the printout is too light, replace the toner cartridge with a new one. • You can select whether or not this message displays on the control panel when the toner is low. See page 5.11.
Press Cont Key Replace Drum	The drum cartridge is nearing the end of its life.	• To continue printing, press the **On-Line/Continue** button. • When the printout is too light, replace the drum cartridge with a new one. • You can select whether or not this message displays on the control panel. See page 5.11.

Message	Status	Do this...
Press Cont Key Replace Transfer	The image transfer unit is nearing the end of its life.	• To continue printing, press the **On-Line/Continue** button. • When the printout is too light, replace the image transfer unit with a new one. • You can select whether or not this message displays on the control panel. See page 5.11.
Press Cont Key Replace T2 Roller	The second transfer roller is nearing the end of its life.	• To continue printing, press the **On-Line/Continue** button. • When the printout is too light, replace the second transfer roller with a new one. Contact a service representative. • You can select whether or not this message displays on the control panel. See page 5.11.
Tray2 Error	Optional Tray2 is not properly installed or connected to the printer.	After turn the printer off and then back on, reinstall the optional tray2. If the message persists, contact a service representative.
Tray2 Jam Cover Open	Tray2 jam cover is open.	Close Tray2 cover firmly.
Waste Motor Error	A problem has occurred in waste toner motor.	Contact a service representative.
Waste Toner Tank Full/Not Install	The waste toner container is full.	Replace the waste toner container with a new one. See page 6.10.

Common Windows Problems

Problem	Possible Cause and Solution
"File in Use" message appears during installation.	Exit all software applications. Remove all software from the StartUp Group, then restart Windows. Reinstall the printer driver.
"Error Writing to LPTx" message appears.	• Ensure that the cables are connected correctly and the printer is on. • If bi-directional communication is not turned on in the driver, it will also cause this message.
"General Protection Fault", "Exception OE", "Spool32", or "Illegal Operation" messages appear.	Close all other applications, reboot Windows and try printing again.

NOTE: Refer to the Microsoft Windows 9x/Me/NT 4.0/2000/XP User's Guide that came with your PC for further information on Windows error messages.

Common Macintosh Problems

Problems in the Chooser

Problem	Possible Cause and Solution
The printer driver icon does not appear in Chooser.	Software is not installed correctly. • The LaserWriter driver should be present as a part of the Macintosh OS. Make sure that the LaserWriter driver is in the **Extensions** folder within the **Systems** folder. If not, install the LaserWriter driver component from the Macintosh OS CD. • Make sure that you are using a high-quality cable. • Make sure that the printer is on the correct network. Select **Network** or **AppleTalk Control Panel** from **Control Panels** in the **Apple** menu and then choose the correct network.
The printer name does not appear in the **Select a PostScript Printer** box in the Chooser.	• Make sure that the cables are connected correctly and the printer is turned on. • Check if "Ready" appears on the display of the control panel. If not, press the **On-Line/Continue** button to switch your printer to on-line. • Make sure that the correct printer driver has been selected in Chooser. • If the printer resides on a network with multiple zones, make sure that the correct zone is selected in the AppleTalk Zones box in Chooser. • Make sure that AppleTalk is on; the button next to **Active** is selected in Chooser. You may need to restart the computer to activate the change.

Printing Errors

Problem	Possible Cause and Solution
You cannot use the computer while the printer is printing.	Background Printing has not been selected. • For LaserWriter 8.3, turn **Background Printing** on in the Chooser. Status messages will now be redirected to the Print Monitor allowing you to continue working while the computer is processing data to be sent to the printer. • For LaserWriter 8.4 or higher, turn **Background Printing** on at the Print window.

Common Linux Problems

Problem	Possible Cause and Solution
I can't change settings in the configuration tool.	You need to have administrator privileges to be able to change global settings.
I am using the KDE desktop but the configuration tool and LLPR won't start.	You may not have the GTK libraries installed. These usually come with most Linux distributions, but you may have to install them manually. Refer to your distribution's installation manual for more details about installing additional packages.
I just installed this package but can't find entries in the KDE/Gnome menus.	Some versions of the KDE or GNOME desktop environments may require that you restart your session for the changes to take effect.
I get a "Some options are not selected" error message while editing the printer settings.	Some printers have conflicting settings, meaning that some settings for two options can't be selected at the same time. When you change a setting and the Printer Package detects such a conflict, the conflicting option is changed to a "No Choice" value. You have to choose an option that does not conflict before being able to submit the changes.
I can't make a printer the system default.	In some conditions, it may not be possible to change the default queue. This happens with some variants of LPRng, especially on recent RedHat systems that use the "printconf" database of queues. When using printconf, the **/etc./printcap** file is automatically refreshed from the database of printers managed by the system (usually through the "printtool" command), and the queues in **/etc./printcap.local** are appended to the resulting file. The default queue in LPRng is defined as the first queue in **/etc./printcap**, therefore it is not possible for the Linux Printer Package to change the default when some queues have otherwise been defined using printtool. LPD systems identify the default queue as the one named "lp". Thus, if there is already a queue by this name, and if it doesn't have any alias, then you won't be able to change the default. To work around this, you can either delete the queue or rename it by manually editing the **/etc./printcap** file.
The N-up setting does not work correctly for some of my documents.	The N-up feature is achieved through post-processing of the PostScript data that is being sent to the printing system. However, such post-processing can only be adequately achieved if the PostScript data conforms to the Adobe Document Structing Conventions. Problems may arise when using N-up and other features relying on post-processing if the document being printed isn't compliant.

Problem	Possible Cause and Solution
I am using BSD lpr (Slackware, Debian, older distributions) and some options chosen in LLPR don't seem to take effect.	Legacy BSD lpr systems have a hard limitation on the length of the option string that can be passed to the printing system. As such, if you selected a number of different options, you may exceed the length of the options and some of your choices won't be passed to the programs responsible for implementing them. Try to select less options that deviate from the defaults, to save on memory usage.
I am trying to print a document in Landscape mode, but it prints rotated and cropped.	Most Unix applications that offer a Landscape orientation option in their printing options will generate correct PostScript code that should be printed as is. In that case, you need to make sure that you leave the LLPR option to its default Portrait setting, to avoid unwanted rotations of the page that would result in a cropped output.
Some pages come out all white (nothing is printed), and I am using CUPS.	If the data being sent is in Encapsulated PostScript (EPS) format, some earlier versions of CUPS (1.1.10 and before) have a bug preventing them from being processed correctly. When going through LLPR to print, the Printer Package will work around this issue by converting the data to regular PostScript. However, if your application bypasses LLPR and feeds EPS data to CUPS, the document may not print correctly.
I can't print to a SMB (Windows) printer.	To be able to configure and use SMB-shared printers (such as printers shared on a Windows machine), you need to have a correct installation of the SAMBA package that enables that feature. The "smbclient" command should be available and usable on your system.
My application seems to be frozen while LLPR is running.	Most Unix applications will expect a command like the regular "lpr" command to be non-interactive and thus return immediately. Since LLPR is waiting for user input before passing the job on to the print spooler, very often the application will wait for the process to return, and thus will appear to be frozen (its windows won't refresh). This is normal and the application should resume functioning correctly after the user exits LLPR.
How do I specify the IP address of my SMB server?	It can be specified in the "Add Printer" dialogue of the configuration tool, if you don't use the CUPS printing system. Unfortunately, CUPS currently doesn't allow you to specify the IP address of SMB printers, so you will have to be able to browse the resource with Samba in order to be able to print.
Some documents come out as white pages when printing.	Some versions of CUPS, especially those shipped with Mandrake Linux before the 8.1 release, have some known bugs when processing the PostScript output from some applications. Try upgrading to the latest version of CUPS (at least 1.1.14). Some RPM packages for the most popular distributions are provided as a convenience with this Linux Printing Package.

Problem	Possible Cause and Solution
I have CUPS and some options (such as N-up) seem to be always enabled even though I don't choose them in LLPR.	There may be some local options defined in your **~/.lpoptions** file, which are manipulated by the lpoptions command. These options are always used if not overridden by LLPR settings. To get rid of all options for a printer, run the following command, replacing "printer" with the name of the queue: lpoptions -x printer
I configured a printer to print to a file, but I get "Permission denied" errors.	Most printing systems will not run as the super-user but as a special user (usually "lp"). Therefore, make sure that the file you have chosen to print to is accessible to the user owning the spooler daemon.
On my PCL (or GDI) printer, I sometimes get error messages printing instead of my document.	Unfortunately, some Unix applications may generate non-compliant PostScript output that may not be supported by Ghostscript, or even the printer itself in PostScript mode. You can try to capture the output to a file and view the results with Ghostscript (gv or ghostview will allow you to do so interactively) and see if you get error messages. However, since the application is at fault probably, contact your software vendor to inform them of the issue.
Some color images come out all black.	This is a known bug of Ghostscript (until GNU Ghostscript version 7.05) when the base color space of the document is indexed color space and it is converted through CIE color space. Because Postscript uses CIE color space for Color Matching System, you should upgrade Ghostscript on your system at least GNU Ghostscript version 7.06 or later. You can find the recent Ghostscript at www.ghostscript.com.

A Using Your Printer with a Macintosh

This chapter includes:

- **Installing Software for Macintosh**
- **Printing a Document**
- **Using Advanced Printing Features**

Installing Software for Macintosh

Your printer supports Macintosh systems with a built-in USB interface. When you print a file from a Macintosh computer, you can use the SPLC driver to support your printer's major printing features.

System Requirements

To use your printer and its software with a Macintosh, your system should have:

Macintosh Hardware Requirement:

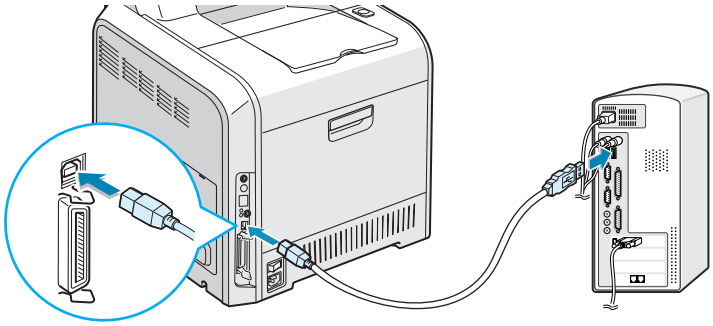
- One of the following Macintosh models:
  -Power Macintosh series
  -Power Macintosh G3, G4
  -iMac series
  -PowerBook series
  -iBook series
- USB interface

Macintosh System Requirement:
System 8.6 or later

NOTE: Please refer SAMSUNG Homepage for MAC OS 10.x printer driver. SAMSUNG Homepage: www.samsungprinter.com

Installing Software

1 Turn the printer and computer off and plug the USB cable into your printer's USB connector. For more details, refer to the Setup Guide.



NOTE: If you are using a USB hub, connect the printer's cable to the first tier of the hub, or the printer may malfunction. If the printer doesn't work with the hub, connect it directly to the USB port.

2 Turn on your computer and printer.

3 Insert the CD-ROM which came with your printer into the CD-ROM drive.

4 Double-click **SAMSUNG_CLP** on your Macintosh desktop.

5 Double-click the **West** folder.

6 Double-click the **Samsung CLBP installer** icon next to each language to select the correct one.

7 Click **Continue**, and then click **Continue**.

8 The Samsung CLBP installer window opens. Select the installation type. The window provides the following two options for software installation:

- **Easy Install** (recommended method): This option installs the SPLC driver.
- **Custom Install**: This option allows you to choose which components will be installed, the SPLC driver or Adobe Acrobat Reader program for opening the User's Guide.

9 Click **Install**.

If other programs are operating, the alert message appears. Click **Continue** to install the software, or click **Cancel** and close other programs, and install the software.

10 After installation is complete, click **Restart**.

Choosing Your Printer

1 From the **Apple** menu, select **Chooser**.

2 From the left pane of the Chooser window, click **Samsung SPLC**. Then your printer name will appear in the right pane of the Chooser window.

3 Click **Samsung SPLC** and **CLP-500**, and close the Chooser window.

4 The message window indicating that you have changed your current printer appears. Click **OK**.

5 An CLP-500 icon will be created on your desktop.

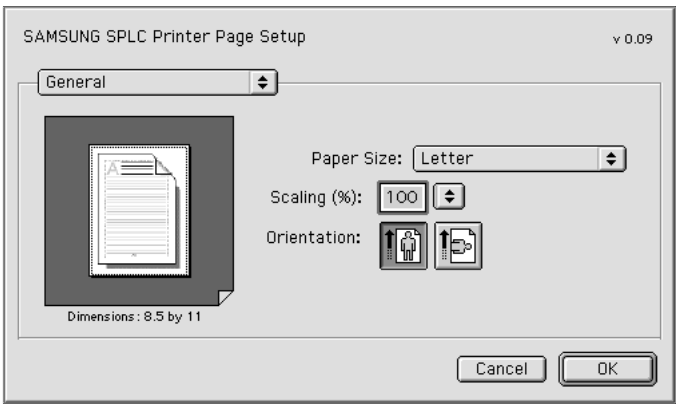
Printing a Document

When you print with a Macintosh, you need to check the printer software setting in each application you use. Follow these steps to print from a Macintosh:

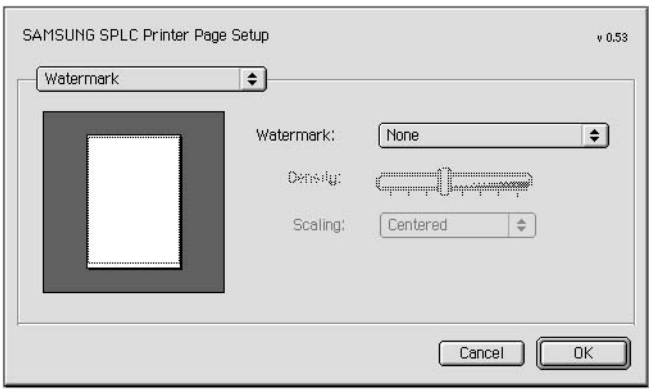
1. Open a Macintosh application and select a file you want to print.

2. Open the **File** menu, and click **Page Setup** (**Document Setup** in some applications).

3. Choose your paper size, orientation, scaling and other options, and then click **OK**.



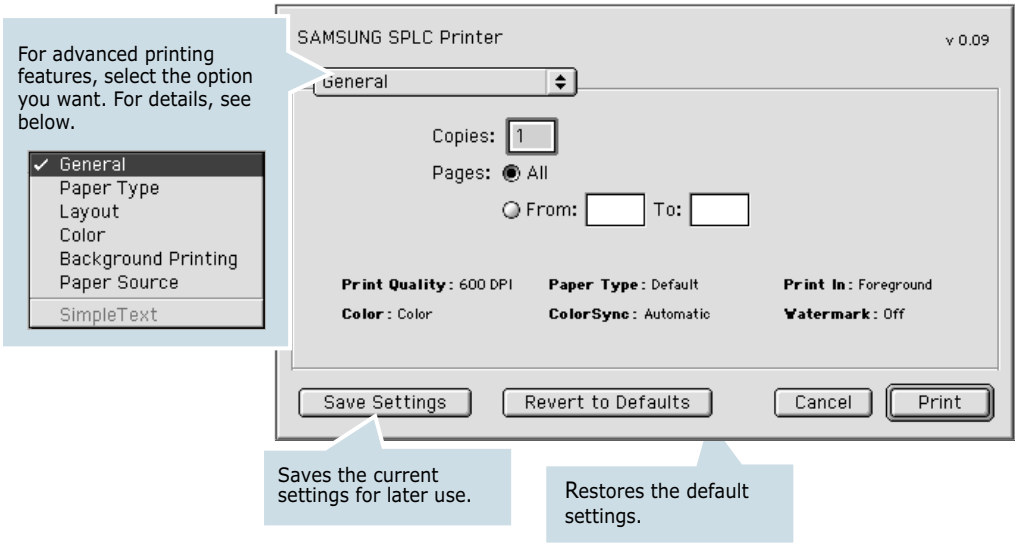
Choose **Watermark** to add a watermark to each page in your document to emphasize its purpose or indicate how it should be handled. For details on the watermark options, see "Using Watermarks" on page 4.10.



NOTE: The higher than Mac OS 9.1 version doesn't support the Watermark feature.

4 Open the **File** menu and click **Print**. You will see the SAMSUNG SPLC Printer window.

5 Choose the number of copies and indicate which pages you want to print.



6 Click **Print** when you finish setting the options.

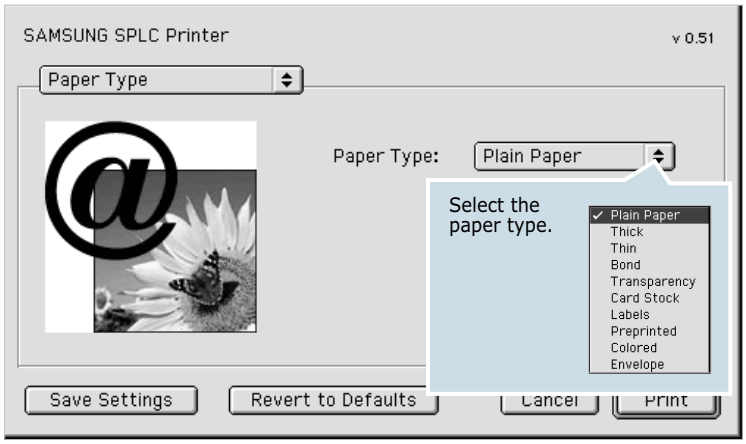
Using Advanced Printing Features

The SAMSUNG SPLC Printer window contains five categories of advanced properties. Listed below is the name of each property.

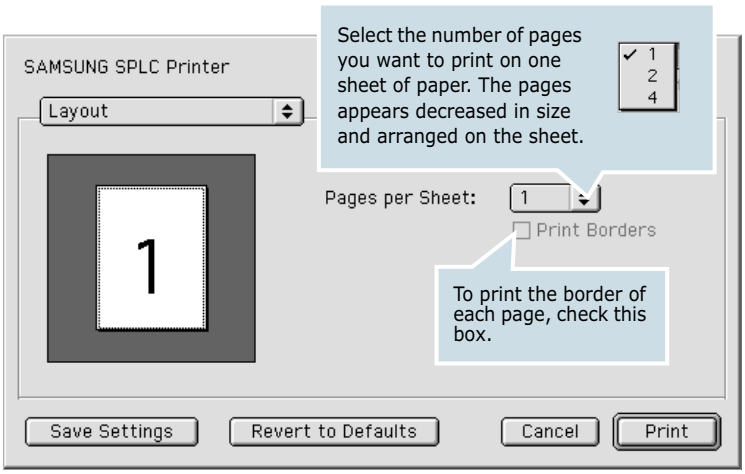
- Paper Type
- Layout
- Color
- Background Printing
- Paper Source

Figures next display each property in the SAMSUNG SPLC Printer window.

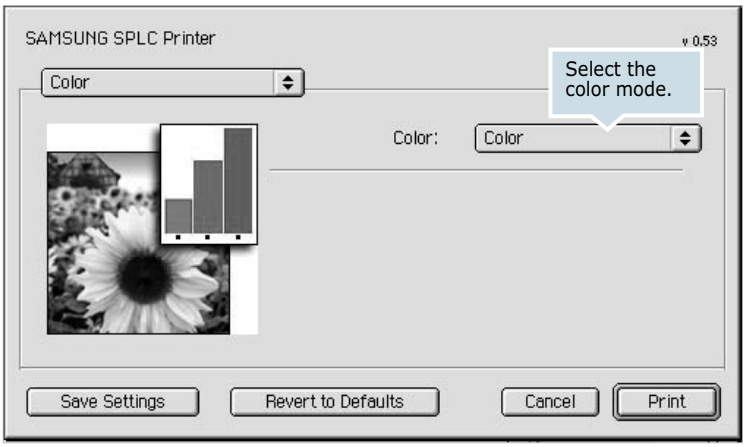
Paper Type



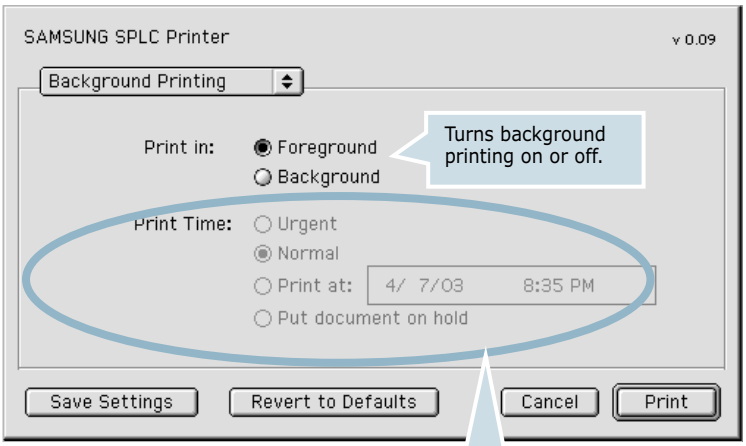
Layout



Color



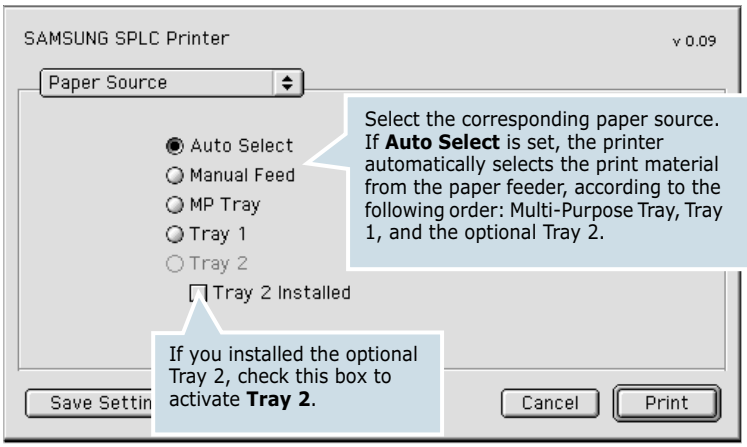
Background Printing



Select a priority for your print job in the queue of jobs waiting to print, click one of the following:

- **Urgent**: to print before any Normal priority job.
- **Normal**: to print in the order the job is received.
- **Print at**: to print at the specific time you enter in the day and time in the fields to the right.
- **Put document on hold**: to hold the print job in the print queue until you are ready to release it.

Paper Source


SAMSUNG SPLC Printer
v 0.09
Paper Source
Auto Select
Manual Feed
MP Tray
Tray 1
Tray 2
Tray 2 Installed
Select the corresponding paper source. If **Auto Select** is set, the printer automatically selects the print material from the paper feeder, according to the following order: Multi-Purpose Tray, Tray 1, and the optional Tray 2.
If you installed the optional Tray 2, check this box to activate **Tray 2**.
Save Settin
Cancel
Print

B USING YOUR PRINTER IN LINUX

You can use your printer in a Linux environment.

This chapter includes:

- **Installing the Printer Driver**
- **Using the Configuration Tool**
- **Changing LLPR Properties**

Installing the Printer Driver

System Requirements

Supported OS

- Redhat 6.2/7.0/7.1 and above
- Linux Mandrake 7.1/8.0 and above
- SuSE 6.4/7.0/7.1 and above
- Debian 2.2 and above
- Caldera OpenLinux 2.3/2.4 and above
- Turbo Linux 6.0 and above
- Slackware 7.0/7.1 and above

Recommended Requirements

- Pentium II or Power PC G3
- RAM 64 MB or higher
- HDD 20 MB or higher

Softwares

- Glibc 2.1 or higher
- GTK+ 1.2 or higher
- GhostScript

Installing the Printer Driver

1. Make sure that you connect the printer to your computer. Turn both the computer and the printer on.

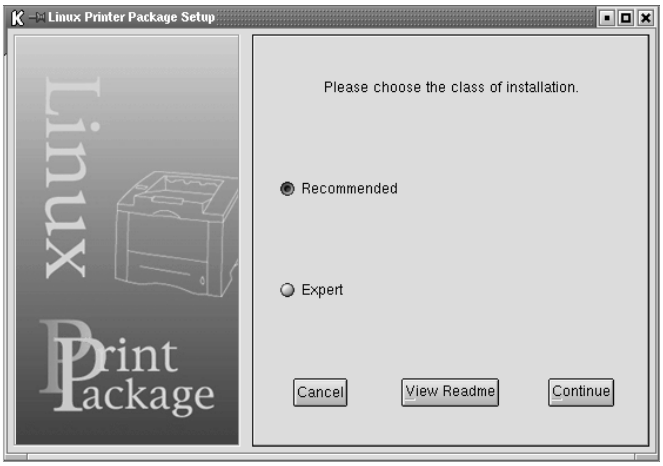
2. When the Administrator Login window appears, type in "**root**" in the Login field and enter the system password.

NOTE: You must log in as a super user (root) to install the printer software. If you are not the super user, ask your system administrator.

3 Insert the printer software CD-ROM. The CD-ROM automatically runs.

NOTE: If the CD-ROM does not automatically run, click the icon at the bottom of the window. When the Terminal screen appears, type in:
[root@local /root]# **cd /mnt/cdrom** (the CD-ROM directory)
[root@local cdrom]# **./setup.sh**

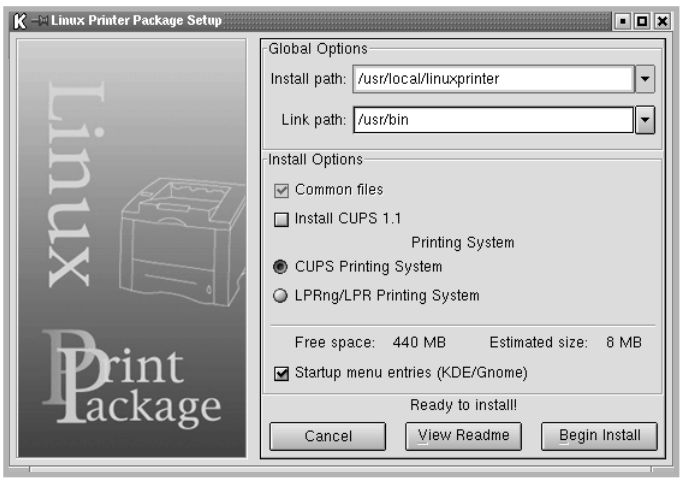
4 Select the installation type, either **Recommended** or **Expert**, and then click **Continue**.



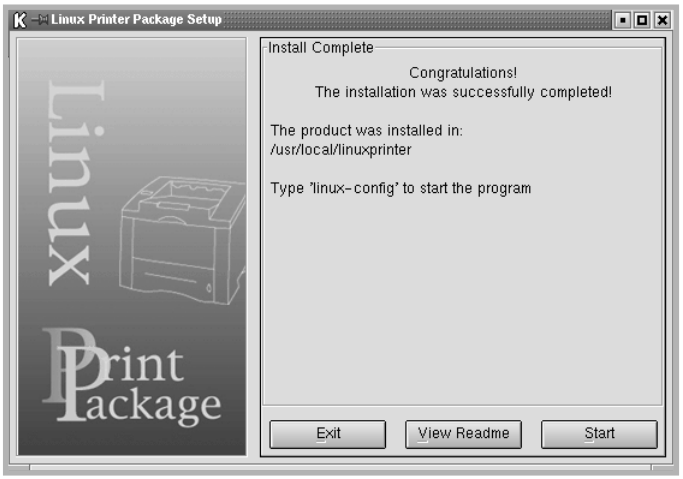
Recommended is fully automated and no interaction is required. **Expert** installation allows you to select the install path or printing system.

5 If you selected **Recommended**, go to Step 6.

For **Expert**, select an option and then click **Begin Install**.



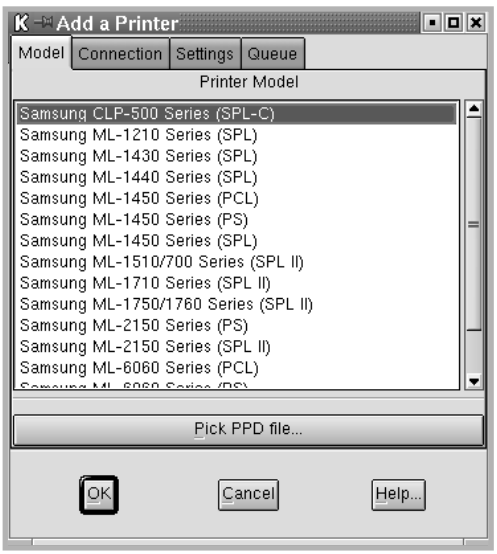
6 The printer driver installation begins. When the installation is completed, click **Start**.



7 The Linux Printer Configuration window opens. Click the **Add Printer** icon on the tool bar at the top of the window.

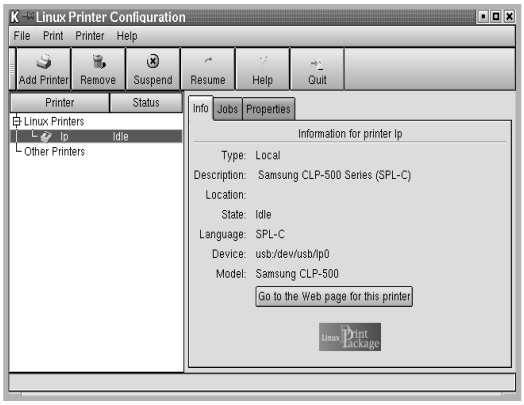
NOTE: Depending on the printing system in use, the Administrator Login window may appear. Type in "**root**" in the Login field and enter the system password.

8 You see the printers currently added to your system. Select the printer you want to use. The function tabs available for the selected printer appear at the top of the Add a Printer window.



NOTE: If the printer supports PS printing, you should select the PS driver.

9 Click the **Connection** tab and ensure that the printer port is set properly. If not, change the device setting.



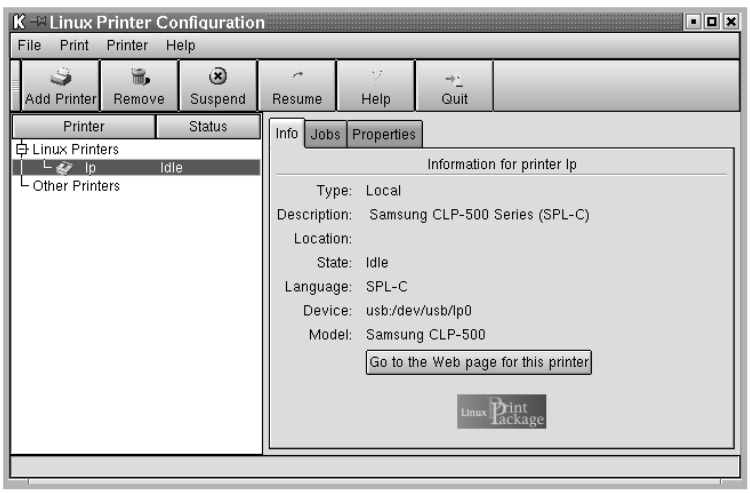
10 You can use the **Settings** tab and the **Queue** tab to view the printer's current settings. If necessary, you can change the settings.

NOTE: The options may differ depending on the printer in use. The Description and the Location field in the Queue screen may not appear depending on the printing system in use.

11 To exit, click **OK**.

12 When the window prompts that the new printer is successfully configured, click **OK**.

13 The Linux Printer Configuration window reappears. You can view the information about your printer from the **Info** tab. If necessary, you can change the printer's configuration. For details about changing the printer's configuration, see "Using the Configuration Tool" on page B.8.



Changing the Printer Connection Method

If you change the printer connection method from USB to parallel or vice versa while in use, you must re-configure your Linux printer by adding the printer to your system. Take the following steps:

1. Make sure that you connect the printer to your computer. Turn both the computer and the printer on.

2. When the Administrator Login window appears, type in "**root**" in the Login field and enter the system password.

NOTE: You must log in as a super user (root) to install a new printer to the printing system. If you are not the super user, ask your system administrator.

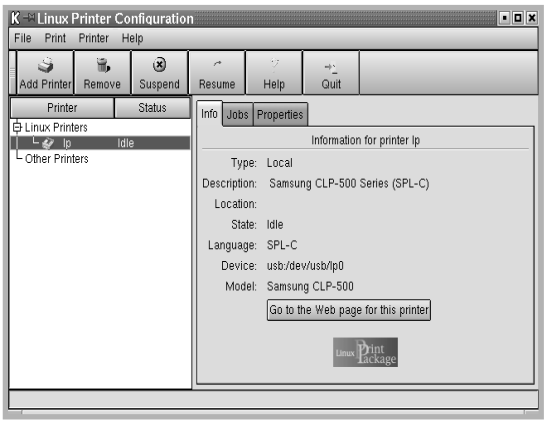
3. From the Startup Menu icon at the bottom of the desktop, select **Linux Printer** and then **Configuration Tool**.

   You can also access the Linux Printer Configuration window by typing "**linux-config**" in the Terminal screen.

4. When the Linux Printer Configuration window appears, click the **Add Printer** icon on the tool bar at the top of the window.

5. Click the **Connection** tab at the top of the Add a Printer window.

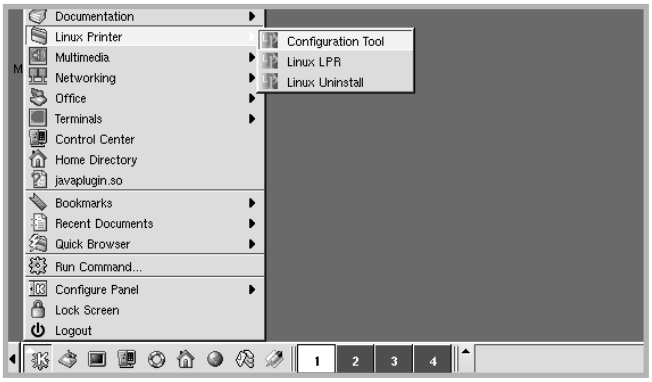
   Ensure that the printer port is set properly. If not, change the device setting.



6. Click **OK**.

Uninstalling the Printer Driver

1 From the Startup Menu icon at the bottom of the desktop, select **Linux Printer** and then **Configuration Tool**.



You can also access the Linux Printer Configuration window by typing "**linux-config**" in the Terminal screen.

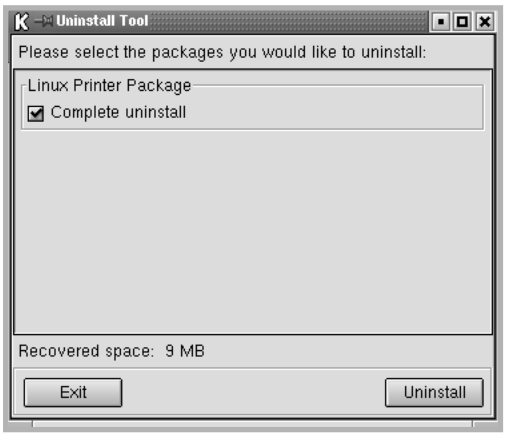
2 In the Linux Printer Configuration window, select the **Uninstall** command from the **File** menu.

3 The Administrator Login window appears. Type in "**root**" in the Login field and enter the system password. Click **Proceed**.

NOTE: You must log in as a super user (root) to uninstall the printer software. If you are not the super user, ask your system administrator.

4 A message window appears asking you to confirm the uninstallation. Click **Yes**.

5 Select **Complete uninstall** and then click **Uninstall**.



6 Click **OK** to begin uninstallation.

7 When the uninstallation is completed, click **Finished**.

Using the Configuration Tool

The configuration tool accesses administrative tasks, including adding and removing a new printer, and changing their global settings. Regular users can also run it to easily inspect job queues, examine the printer properties and change their local preferences.

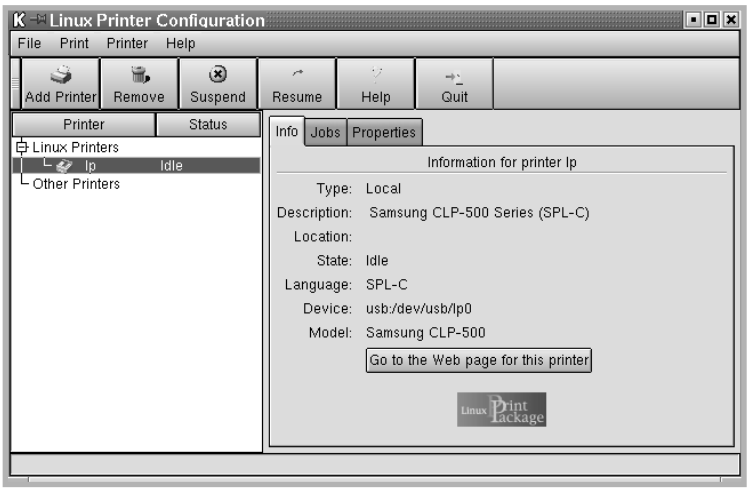
To access the Configuration Tool:

1 From the Startup Menu icon at the bottom of the screen, select **Linux Printer** and then **Configuration Tool**. The Linux Printer Configuration window appears.

You can also open this window from the Terminal screen by typing in "**linux-config**."

2 The Linux Printer Configuration window shows a list of installed printers in the left pane. The right pane shows a number of tabs that display information regarding the currently selected printer.

Select your printer, if not currently selected.

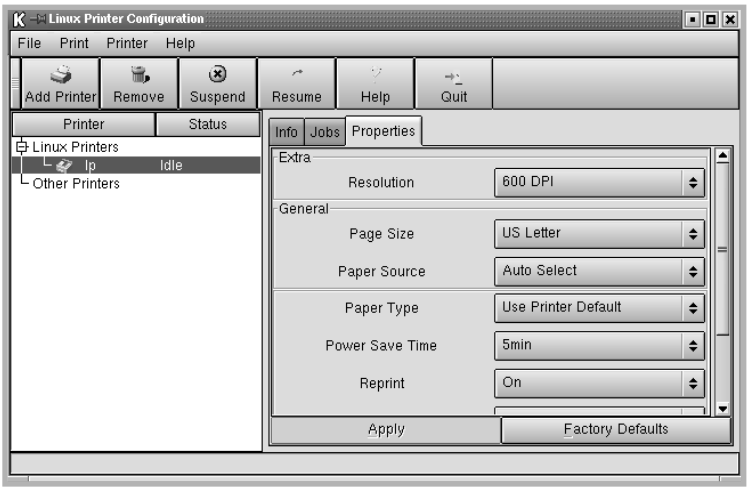


3 The **Info** tab shows general information about the printer.

If you are an Internet user, you can click **Go to the Web page for this printer** to access the web page.

Click the **Jobs** tab to inspect and manage the job queue for the selected printer. You can suspend, resume or delete a specific job(s) in the queue. If you drag a specific job(s), you can drop it into the print queue of another printer.

The **Properties** tab allows you to change the default printer settings.



NOTE: Regular users are able to override the system-wide default settings defined by the administrator. When a regular user clicks **Apply**, these custom settings are saved in the user's profile and may be later used with LLPR. If the administrator is running the configuration tool, then the settings are saved as the new global defaults.

B

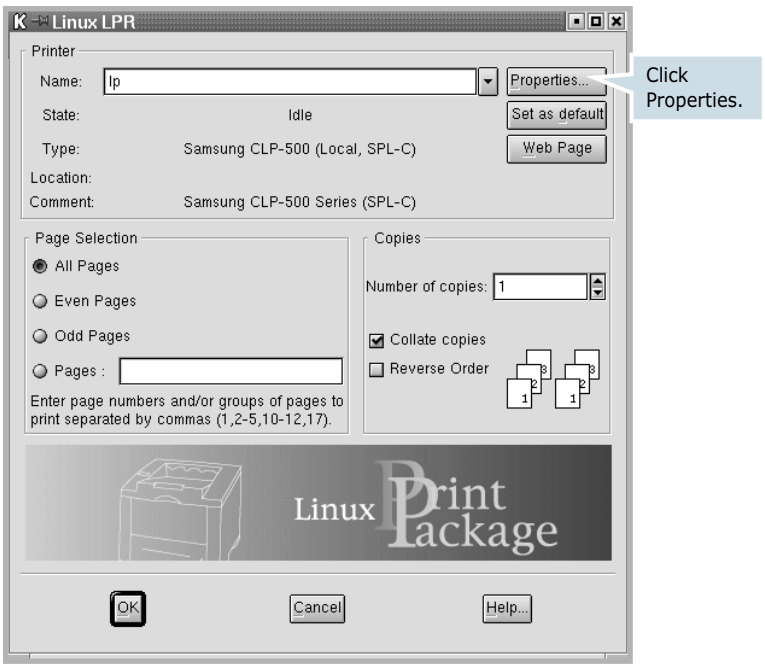
Changing LLPR Properties

You can fine tune the printer's properties by opening the LLPR Properties window.

To open the LLPR Properties window:

1 From the application you are using, select the **Print** command.

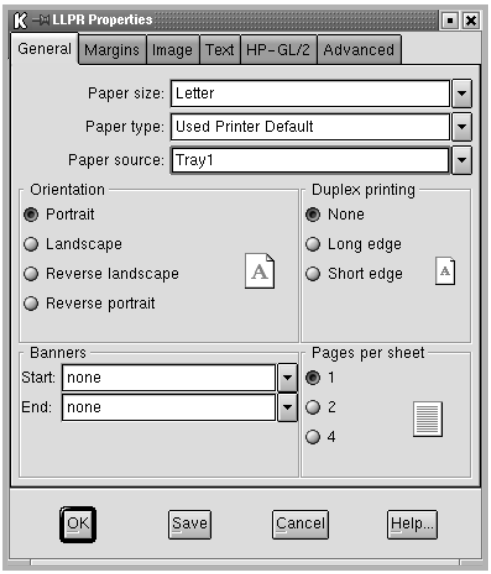
2 When the Linux LPR window opens, click **Properties**.



You can also open the LLPR window:

- Click the Startup Menu icon at the bottom of the screen and select **Linux Printer** and then **Linux LPR**.
- If the Linux Printer Configuration window is currently open, select **Test Print** from the **Print** menu.

3 The LLPR Properties window opens.



The following six tabs are at the top of the window:

- **General** - allows you to change the paper size, the paper type, the paper source, the orientation of the documents; enables the duplex feature, adds start and end banners, and changes the number of pages per sheet.
- **Margins** - allows you to specify the page margins. The graphics on the right shows the current settings. These margins do not apply when printing regular PostScript data.
- **Image** - allows you to set image options that are used when printing image files, i.e. when a non-PostScript document is passed to LLPR on the command line. Color settings will also take effect for postscript documents.
- **Text** - allows you to select the density of the text and turn the syntax coloring on or off.
- **HP-GL/2** - allows you to set default options to print documents in the HP-GL/2 format, which is used by some plotters.
- **Advanced** - allows you to override the default settings for the printer.

If you click the **Save** button at the bottom of the window, the options are kept between LLPR sessions.

Use the **Help** button to view details about the options in the window.

4 To apply the options, click **OK** in the **LLPR Properties** window. You are returned to the **Linux LPR** window. To start printing, click **OK**.

MEMO

C

Using Your Printer on a Network

If you work in a networked environment, the printer can be shared by other users on the network.

This chapter includes:

- **About Sharing the Printer on a Network**
- **Setting Up a Locally Shared Printer**
- **Setting Up a Network-Connected Printer**

Note: If you are a CLP-500 user, you need to install an optional network interface card. For more information, see Appendix D, "Installing Printer Options".

About Sharing the Printer on a Network

If you work in a networked environment, you can connect your printer to the network.

Locally-Shared Printer

You can connect the printer directly to a selected computer, which is called the "host computer" on the network. The printer can then be shared by other users on the network through a Windows 9x/Me/XP/NT 4.0/2000 network printer connection.

Wired Network-connected Printer

A CLP-500N printer has the built-in network interface. See page D.6 for information about installing the card.

To use a CLP-500 printer as a network printer, you need to install an optional network interface card in your printer.

Wireless Network-connected Printer

To use your printer in a wireless network environment, you need to install an optional wired/wireless network interface card in your printer. See page D.6.

Printing Across a Network

Whether the printer is locally connected or network-connected, you need to install the CLP-500 series printer software on each computer that prints documents using the printer.

Setting Up a Locally Shared Printer

In Windows 98/Me

Setting Up the Host Computer

1. Start Windows.
2. From the **Start** menu, select **Control Panel** from **Settings** and double-click on the **Network** icon.
3. Check the **File and Print Sharing** box, and click **OK**. Close the window.
4. From the **Start** menu, select **Printers** from **Settings** and double-click your printer name.
5. Select **Properties** in the **Printer** menu.
6. Click the **Sharing** tab and check the **Shared As** box. Fill in the **Shared Name** field and click **OK**.

Setting Up the Client Computer

1. Right-click the Windows **Start** button and select **Explorer**.
2. Open your network folder in the left column.
3. Right-click the shared name and select **Capture Printer Port**.
4. Select the port you want, check the **Reconnect at log on box**, and click **OK**.
5. From the Start menu, select **Settings** and then **Printers**.
6. Double-click your printer icon.
7. From the **Printer** menu, select **Properties**.
8. From the **Details** tab, select the printer port and click **OK**.

In Windows NT 4.0/2000/XP

Setting Up the Host Computer

1. Start Windows.
2. For Windows NT 4.0/2000, select **Settings**, and **Printers** from the Start menu.

   For Windows XP, select **Printers and Faxes** from the Start menu.
3. Double-click your printer icon.
4. From the **Printer** menu, select **Sharing**.
5. For Windows NT 4.0, check the **Shared** box.

   For Windows 2000, check the **Shared As** box.

   For Windows XP, check the **Share this printer** box.
6. For Windows NT 4.0, fill in the **Shared Name** field and click **OK**.

   For Windows 2000/XP, fill in the **Shared Name** field and click **OK**.

Setting Up the Client Computer

1. Right-click the Windows **Start** button and select **Explorer**.
2. Open your network folder in the left column.
3. Click the shared name.
4. For Windows NT 4.0/2000, select **Settings** and **Printers** from the **Start** menu.

   For Windows XP, select **Printers and Faxes** from the **Start** menu.
5. Double-click your printer icon.
6. From the **Printer** menu, select **Properties**.
7. From the **Ports** tab, click **Add Port**.
8. Select **Local port** and click **New Port**.
9. Fill in the **Enter a port name** field, enter the shared name.
10. Click **OK** and click **Close**.
11. For Windows NT 4.0, click **OK**.

    For Windows 2000/XP, click **Apply** and click **OK**.

Setting Up a Network-Connected Printer

You have to set up the network protocols on the printer to use it as your network printer. Setting protocols can be accomplished by using the supplied network program. Please refer to SyncThru User's Guide.

You can configure the basic network parameters through the printer's control panel. Use the printer control panel to do the following:

- Enable or disable network protocols (IPX/SPX)
- Configure TCP/IP
- Configure IPX frame types

Configuring Network Parameters on the Control Panel

Supported Operating Systems

Item	Requirements
Network Interface	10/100 Base-TX (standard for CLP-500N) or 802.11b Wireless LAN
Network Operating System	• Novell NetWare 4.x, 5.x, 6.x • Windows 95/98/Me, NT 4.0/2000/XP • Unix AT&T, BSD4.3, HP-UX, SUN OS, SOLARIS, SCO • Linux RedHat 6.0 or higher
Network Protocols	• Netware IPX/SPX • TCP/IP, DLC/LLC on Windows • Port9100 on Windows NT, Unix, Linux
Dynamic Addressing Server	• DHCP, BOOTP

- IPX/SPX: Internet Packet eXchange/Sequenced Packet eXchange
- TCP/IP: Transmission Control Protocol/Internet Protocol
- DLC/LLC: Data Link Control/Logical Link Control
- DHCP: Dynamic Host Configuration Protocol
- BOOTP: Bootstrap Protocol

Printing a Network Configuration Page

The Network Configuration page shows how the network interface card on your printer is configured. The default settings which are suitable for most applications are enabled.

1. In ready mode press the **Menu** button ( ) until you see 'Network' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until 'Print Net CFG' displays on the bottom line.
4. Press the **Enter** button ( ).

   The Network Configuration page prints out.

Setting Network Protocols

When you first install the printer, all supported network protocols are enabled when you turn the printer on. If a network protocol is enabled, the printer may actively transmit on the network even when the protocol is not in use. This may increase network traffic slightly. To eliminate unnecessary traffic, you can disable unused protocols.

1. In ready mode press the **Menu** button ( ) until you see 'Network' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press the scroll button (or) until 'Config Network' displays on the bottom line. Press the **Enter** button ( ).
4. Press the scroll button (or) to display 'Yes' and press the **Enter** button ( ). Then press the **Upper Level** button ( ).
5. Press the scroll button (or) until you see the desired protocol on the bottom line.

   You can choose 'Netware'.
6. Press the **Enter** button ( ).
7. Press the scroll button (or) to change the setting to 'On' (enable) or 'Off' (disable).
8. Press the **Enter** button ( ) to save the selection.
9. Press the **On-Line/Continue** button ( ).

Configuring TCP/IP

Your printer can be set up on a variety of TCP/IP networks. There are several ways in which your printer can be assigned a TCP/IP address, depending on your network.

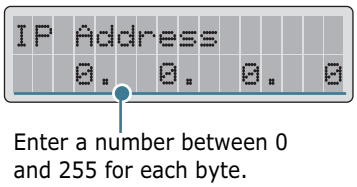
- Static Addressing: TCP/IP address is assigned manually by the system administrator.
- Dynamic Addressing BOOTP/DHCP(default): TCP/IP address is assigned automatically by the server.

Static Addressing

To enter the TCP/IP address from your printer's control panel, take the following steps:

1. In ready mode press the **Menu** button ( ) until you see 'Network' on the bottom line of the display. Press the **Enter** button ( ) to access the menu.
2. Press the **Enter** button ( ) when 'Config Network' displays on the bottom line.
3. Press the scroll button (or) to display 'Yes' and press the **Enter** button ( ).
4. Press the **Upper Level** button ( ), then use the scroll button ( ).
5. Press the **Enter** button ( ) when 'Config TCP' displays.
6. Press the scroll button (or) to display 'Yes' and press the **Enter** button ( ).
7. Press the **Upper Level** button ( ), then use the scroll button ( ).
8. Press the **Enter** button ( ) when 'IP Get Method' displays.
9. Press the scroll button (or) to display 'Static' and press the **Enter** button ( ).
10. Press the **Upper Level** button ( ), then use the scroll button ( ).
11. Press the **Enter** button ( ) to access the IP Address menu.

An IP address consists of 4 bytes.



12 Press the scroll button (◁ or ▷) to enter a number between 0 and 255 and press the **Enter** button (✳).

13 Repeat Step 12 to complete the address from the 1st byte to the 4th byte.

14 To select other parameters, such as the Subnet Mask or Gateway, press the **Upper Level** button (↺), then use the scroll button (◁ or ▷). Press the **Enter** button (✳).

15 Repeat steps 12 through 13 to configure the other TCP/IP parameters.

16 Press the **On-Line/Continue** button (⋯).

Dynamic Addressing (BOOTP/DHCP)

To assign the TCP/IP address automatically by the server, take the following steps:

1 In ready mode press the **Menu** button (▤) until you see 'Network' on the bottom line of the display. Press the **Enter** button (✳) to access the menu.

2 Press the **Enter** button (✳) when 'Config Network' displays on the bottom line.

3 Press the scroll button (◁ or ▷) to display 'Yes' and press the **Enter** button (✳).

4 Press the **Upper Level** button (↺), then use the scroll button (▷).

5 Press the **Enter** button (✳) when 'Config TCP' displays.

6 Press the scroll button (◁ or ▷) to display 'Yes' and press the **Enter** button (✳).

7 Press the **Upper Level** button ( ), then use the scroll button ( ) and select 'IP Get Method' .

8 Press the scroll button (or) to display 'DHCP' and press the **Enter** button ( ).

9 To assign the address from the BOOTP server, press the **Enter** button ( ) when "BOOTP" displays.

10 Press the **On-Line/Continue** button ( ).

Configuring IPX Frame Types

On IPX/SPX protocol networks (for example, Novell NetWare), the format of the network communication frames must be specified for the printer. In most cases, you can keep the default setting 'AUTO'. However, you can manually set the frame type format, if required.

- **AUTO** (default): Automatically senses and limits the frame type to the first one detected.
- **EN_8023**: Limits the frame type to IPX over IEEE 802.3 frames. All others will be discarded.
- **EN_II**: Limits the frame type to IPX over Ethernet Frames. All others will be discarded.
- **EN_8022**: Limits the frame type to IPX over IEEE 802.2 with IEEE 802.3 frames. All others will be discarded.
- **EN_SNAP**: Limits the frame type to IPX over SNAP with IEEE 802.3 frames. All others will be discarded.

Note that the IPX/SPX protocol must be enabled in the **Netware** menu before you can configure frame types. See "Setting Network Protocols" on page C.7.

Take the following steps to change the frame type format:

1. In ready mode press the **Menu** button ( ) until you see 'Network' on the bottom line of the display. Press the **Enter** button ( ) to access the menu.

2. Press the **Enter** button ( ) when 'Config Network' displays on the bottom line.

3. Press the scroll button (or) to display 'Yes' on the bottom line. Press the **Enter** button ( ).

4. Press the **Upper Level** button ( ).

5. Press the scroll button (or) until 'Netware' displays on the bottom line. Press the **Enter** button ( ).

6. Press the **Enter** button ( ) when 'On' displays.

7. Press the **Upper Level** button ( ), then use the scroll button ( ).

8. Press the **Enter** button ( ) when 'Config Netware' displays.

9. Press the scroll button (or) to display 'Yes' on the bottom line. Press the **Enter** button ( ), and then press the **Upper Level** button ( ).

10. Press the **Upper Level** button ( ), then use the scroll button ( ).

11. Press the **Enter** button ( ) when 'IPX Frame Type' displays.

12. Press the scroll button (or) until you see the desired frame type and press the **Enter** button ( ). Then press the **Upper Level** button ( ).

13. Press the scroll button (or) to change the setting and then press the **Enter** button ( ).

14. Repeat steps 12 and 13 to configure another frame type, if necessary.

15. Press the **On-Line/Continue** button ( ).

Restoring the Network Configuration

You can return the network configuration to its default settings.

1. In ready mode press the **Menu** button ( ) until you see 'Network' on the bottom line of the display.
2. Press the **Enter** button ( ) to access the menu.
3. Press scroll button (or) until 'Default Set' displays on the bottom line.
4. Press the **Enter** button ( ) to confirm the selection.

D

Installing Printer Options

Your printer is a full-featured laser printer that has been optimized to meet most of your printing needs. Recognizing that each user may have different requirements, however, Samsung makes several options available to enhance your printer's capabilities.

This chapter includes:

- **Installing Printer Memory**
- **Installing a Network Interface Card**
- **Installing an Optional Tray**

Installing Printer Memory

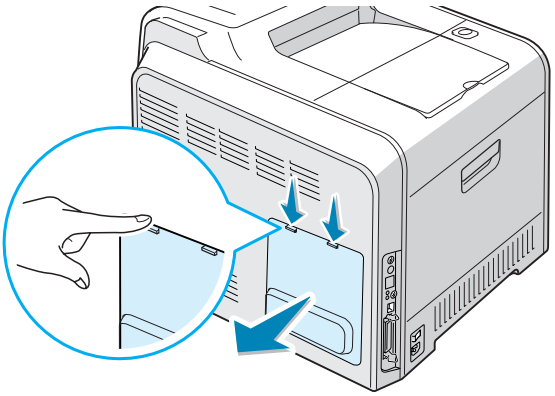
Your printer has a dual in-line memory module (DIMM) slot. Use this DIMM slot to install more memory for the printer.

NOTE: Your printer has 32 MB of memory which can be expanded to 160 MB. You can purchase a 100 Pin-SDRAM Module, 3.3volt of 64 or 128MB.

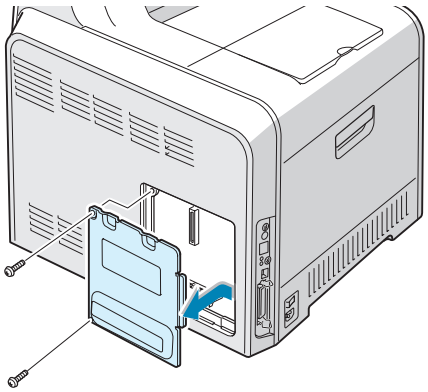
CAUTION: Static electricity can damage DIMMs. When handling a DIMM, either wear an antistatic wrist strap, or frequently touch the surface of the DIMM antistatic package and then touch bare metal on the printer.

1. Turn the printer off and unplug all cables from the printer.

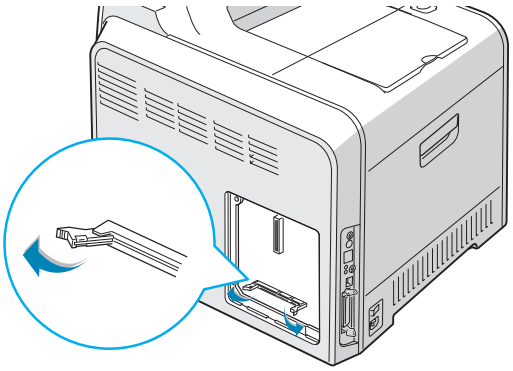
2. To remove the control board cover, press down on the tabs at the top and take it off.



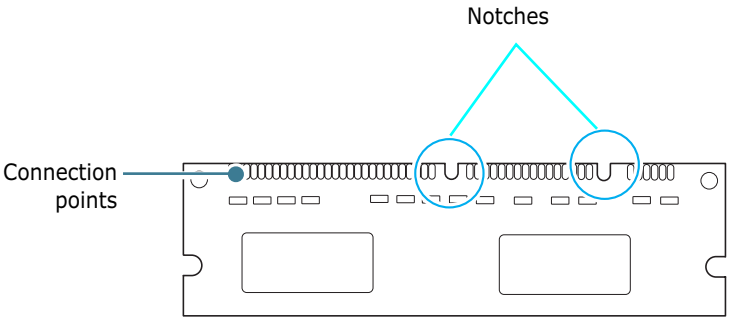
3. Remove the two screws holding the metal plate in place, and then remove the metal cover, as shown below.



4 Open the lever on each side of the DIMM slot all the way.

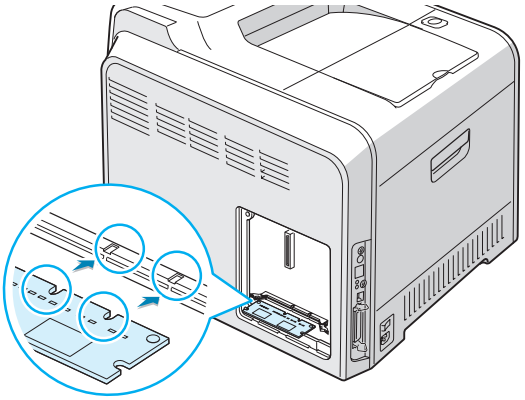


5 Remove the memory DIMM from the antistatic package. Locate the alignment notches on the bottom edge of the DIMM.

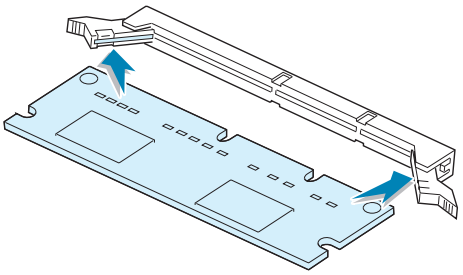


NOTE: Avoid touching the connection points along the edge of the memory.

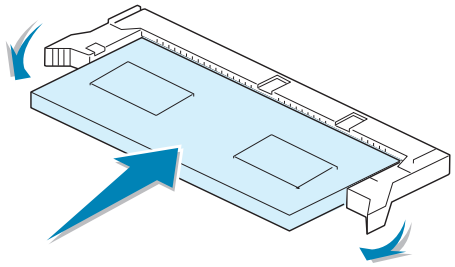
6 Holding the DIMM by the edges, align the notches on the DIMM with the notches at the top of the DIMM slot.



7 Insert the ends of the memory DIMM into the slots on the levers.

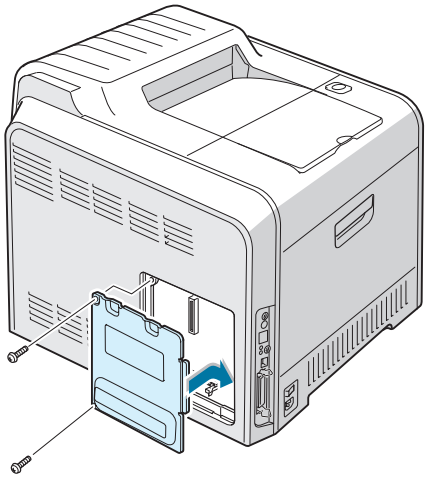


8 Push it firmly to make sure you fully insert the memory DIMM into the slot. The levers on each side are automatically latched.

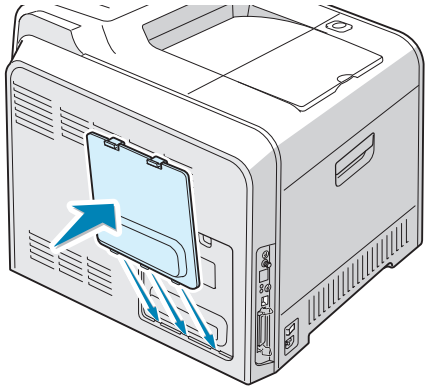


NOTE: If you have difficulty inserting the memory DIMM or closing the levers, make sure the notches on the bottom of the DIMM are aligned with the notches in the DIMM slot.

9 Replace the metal cover, as shown below, and tighten the two screws you removed in step 3.



10 Replace the control board cover.

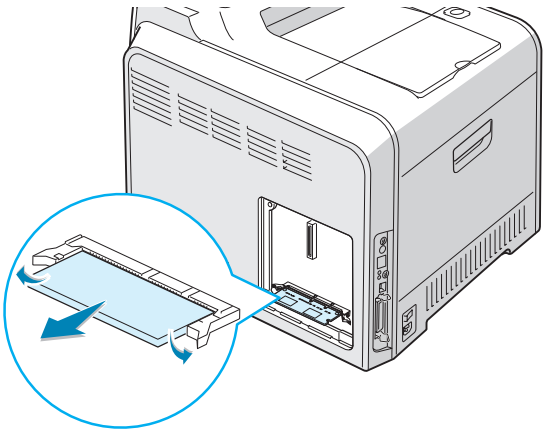


11 Reconnect the power cord and printer cable, and turn the printer on.

Removing the Memory

1 Follow steps 1 through 3 on page D.2 to access the control board.

2 Push the levers at both ends of the DIMM slot away from the DIMM.



3 Place the DIMM in its original packaging or wrap it with sheet of metal as thin as paper such as aluminium foil and store it in a box.

4 Follow from step 9 on page D.4.

Installing a Network Interface Card

NOTE: When you purchase the wired/wireless network interface card, the antenna connected to the card is not separated from the card depending on your country.

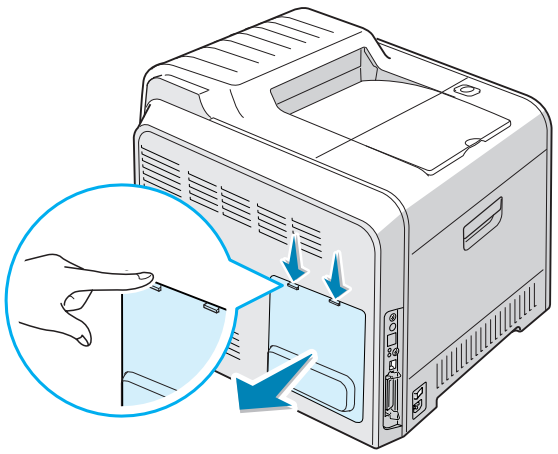
To use your printer on a network, you must be equipped in your printer.

CLP-500N has a built-in network interface card. If you are a CLP-500 user, you need to install an optional network interface card.

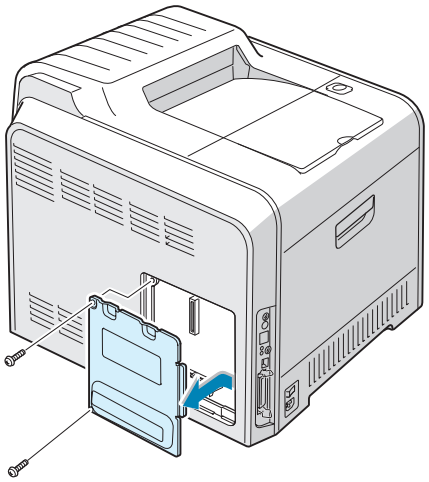
If you want to use the printer in both a wired and a wireless network environments, you need to install an optional wired/wireless network interface card.

1. Turn the printer power off and unplug all cables from the printer.

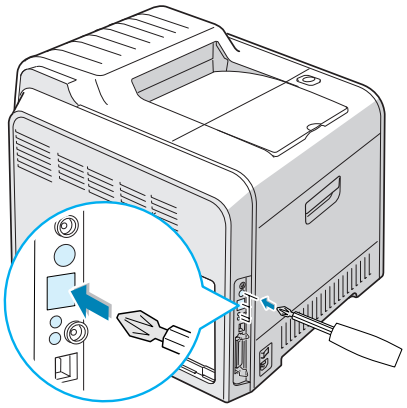
2. To remove the control board cover, press down on the tabs at the top and take it off.



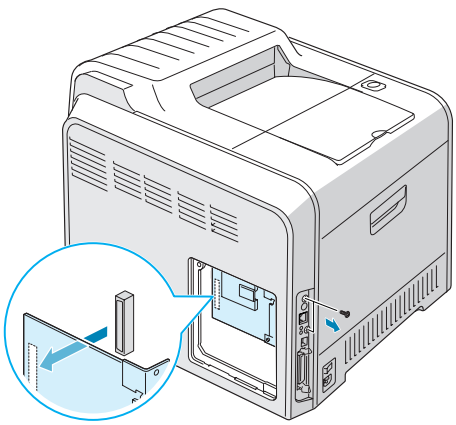
3 Remove the two screws holding the metal plate in place, and then remove the metal cover, as shown below.



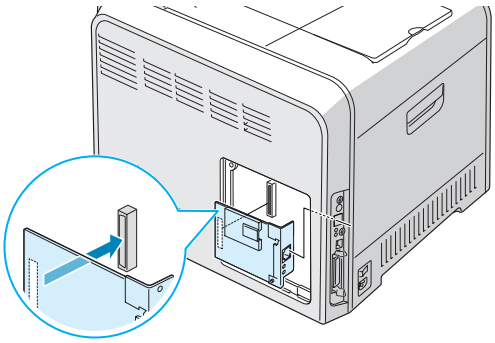
4 Push the hole lid using a tool with sharp end.



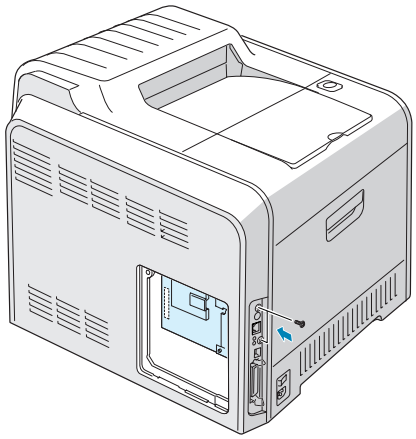
If you replace the network interface card with a new one, remove the two screws and the old card.



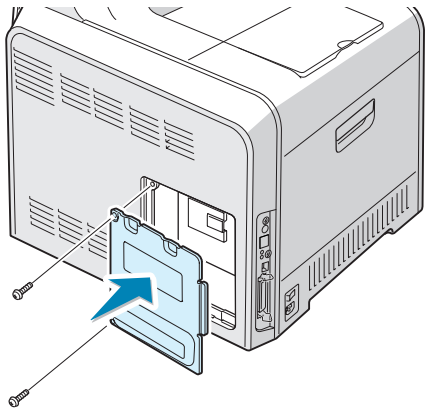
5 Align the connector on the network interface card with the connector on the control board. Make sure that the jacks on the card go through the holes. Push the card firmly into the connector until it is completely inserted into place.



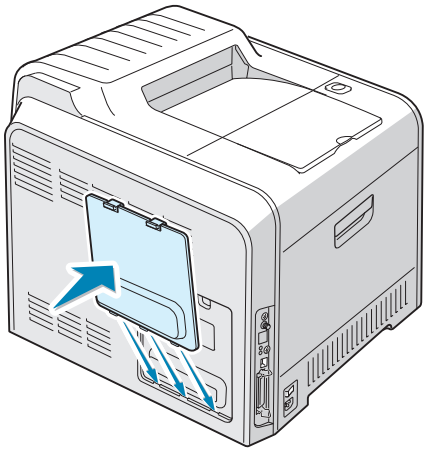
6 Tighten the two screws.



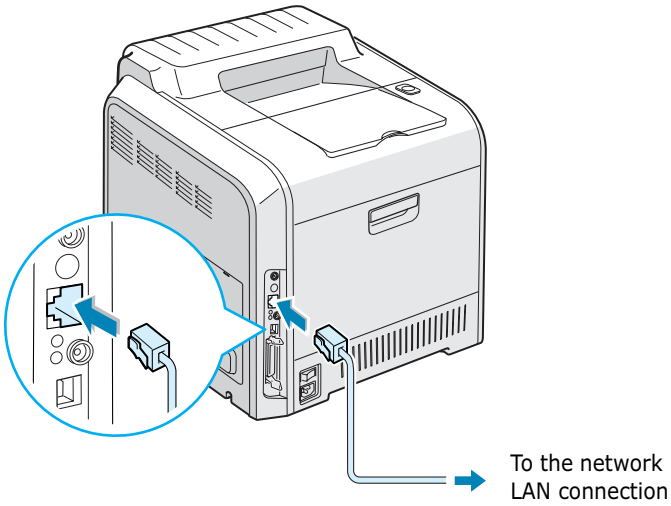
7 Replace the metal cover, as shown below, and tighten the two screws you removed in step 3.



8 Replace the control board cover.



9 Plug one end of the Ethernet cable into the Ethernet network port on the Printer and the other end of the cable into a network LAN connection.



10 Connect the network cable, reconnect the power cord and then turn the printer on.

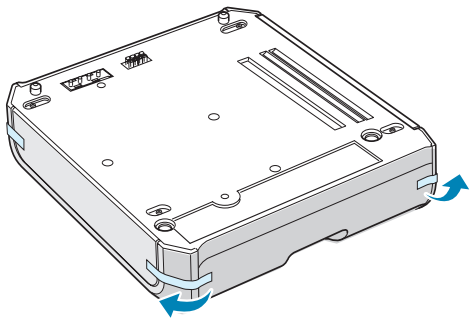
NOTE: For information about configuring and using the printer in a network environment, refer to the User's Guide provided with the network interface card. You can also configure the network parameters using the control panel; see page 5.12.

Installing an Optional Tray

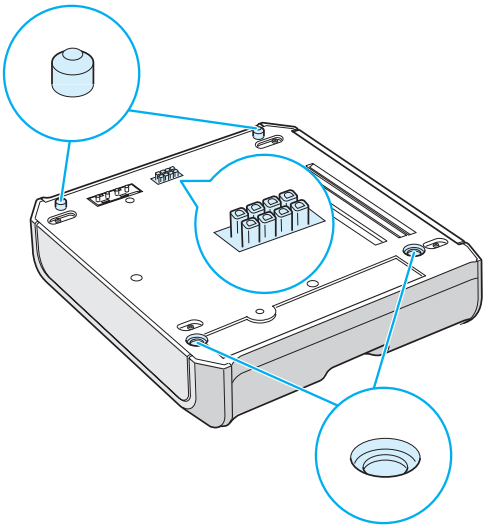
You can increase the paper handling capacity of your printer by installing an optional Tray2. This tray holds 500 sheets of paper.

1 Turn the printer off and unplug all cables from the printer.

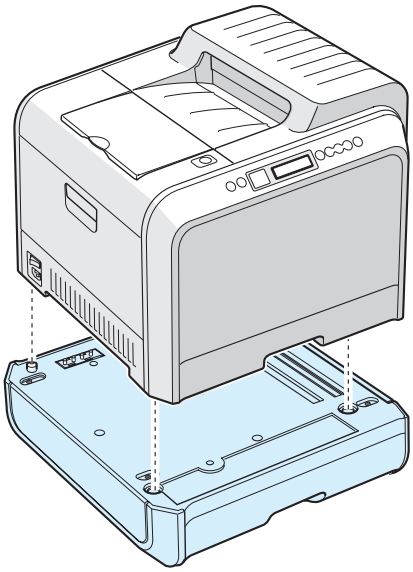
2 Remove the packing tape and the packing material inside of the tray.



3 Find the location of the connector and the optional tray positioners.



4 Place the printer over the tray, aligning the feet on the printer with the positioners in the optional tray.



5 Load paper in the optional tray. For information about loading paper in this tray, see "Using the Optional Tray 2" on page 2.8.

6 Reconnect the power cord and cables and then turn the printer on.

When you print a document on the paper loaded in Tray 2, you must configure the properties of the printer driver.

To access the properties of the printer driver:

1 Click the Windows **Start** menu.

2 For Windows 95/98/Me/NT 4.0/2000, select **Settings** and then **Printers**.
For Windows XP, select **Printers and Faxes**.

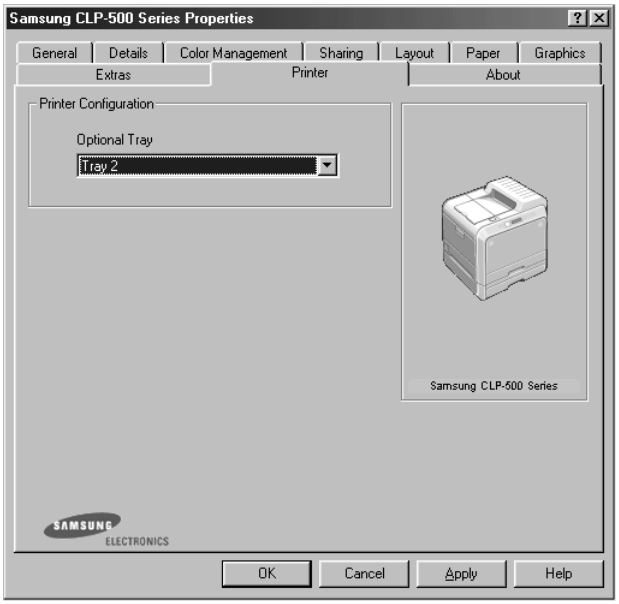
3 Select the **Samsung CLP-500 Series** printer.

4 Click the right mouse button on the printer icon and:

In Windows 95/98/Me, select **Properties**.

In Windows NT 4.0/2000/XP, select **Properties**.

5 Click the **Printer** tab, and select **Tray 2** from the **Optional Tray** drop-down list.



6 Click **OK** and print the document.

E SPECIFICATIONS

This chapter includes:

- **Printer Specifications**
- **Paper Specifications**

Printer Specifications

Item	Specifications and Description
Print Speed	Black:20 PPM (A4), 21 PPM (Letter);Color: 5 PPM (A4/Letter) Duplex: 10 IPM (Black); 5 IPM (Color)
Resolution	True 600x600 dpi (1200 dpi class)
Warm-up Time	15 seconds (Black); 24 seconds (4-Color)
First Printing on Time	120 seconds below
Power Rating	AC 110 ~ 127V (USA, Canada) / 220 ~ 240V (Others), 50 / 60Hz
Power consumption	400 W average during operation / Less than 30 W in sleep mode
Acoustic Noise	Printing: 50dB
Toner Supply	Four toner cartridges (Black, Yellow, Magenta, Cyan)
Toner cartridge Life	7,000 Sheets (for starter, 2,000 sheets)@ IDC 5% coverage (Black Toner) 5,000 Sheets (for starter, 1,500 sheets) @ IDC 5% coverage (Color (C/M/Y))
Duty Cycle	Monthly: 35,000 pages maximum (Black)
Weight	35kg (including consumables)
Package Weight	Paper: 1.83Kg, Plastic: 0.33Kg
External Dimensions (W x D x H)	510 (W) x 470 (D) x 405 (H) mm
Operating Environment	Temperature: 15 ~ 32.5°C / 50 ~ 90°F Humidity: 20 ~ 80% RH
Emulation	SPL-Color
Machine Life	300,000 images
Random Access Memory (RAM)	Standard 32 MB Expandable to 160 MB: 100 pin, SDRAM, 3.3V; 64, 128 MB available Use only the Samsung-approved DIMM.
Fonts	Windows font
Interface Switching	Automatic (Parallel, USB, Network)
Interface	• IEEE 1284 Bidirectional Parallel - Modes supported: Compatible, Nibble, Byte, ECP • USB Interface Standard - USB 1.1/2.0 compliant - 12/480 Mbps 1 port • Network Interface - 10/100 Base TX (CLP-500: option, CLP-500N: standard) - 802.11b Wireless LAN (optional interface)

Paper Specifications

Overview

Your printer accepts a variety of print materials, such as cut-sheet paper (including up to 100% recycled fiber content paper), envelopes, labels, transparencies and custom-size paper. Properties, such as weight, composition, grain and moisture content, are important factors affecting the printer's performance and the output quality. Paper that does not meet the guidelines outlined in this User's Guide can cause the following problems:

- Poor print quality
- Increased paper jams
- Premature wear on the printer.

NOTES:

- Some paper may meet all of the guidelines in this guide and still not produce satisfactory results. This may be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which Samsung has no control.
- Before purchasing large quantities of paper, ensure that the paper meets the requirements specified in this User's Guide.

CAUTION: Using paper that does not meet these specifications may cause problems, requiring repairs. These repairs are not covered by the Samsung warranty or service agreements.

Supported Sizes of Paper

Tray1 / Tray2	Dimensions*	Weight	Capacity**
Letter	216 X 279mm (8.5 X 11in.)	• 60 to 90g/m^2 bond (16 to 24lb) for the single-sided printing • 75 to 90 g/m^2 bond (20 to 24lb) for the duplex printing	• 250 sheets of 75g/m^2 bond paper for the Tray 1 • 500 sheets of 75g/m^2 bond paper for the Tray 2
A4	210 X 297mm (8.3 X 11.7in.)		

Multi-Purpose Tray	Dimensions*	Weight	Capacity**
Minimum Size (custom)	90 X 140mm (3.5 X 5.5in.)	60 to 163g/m^2 bond (16 to 43lb)	100 sheets of 75g/m^2 bond paper
Maximum Size (custom)	216 X 356mm (8.5 X 14in.)		
Transparency	Same minimum and maximum paper sizes as listed above.	Thickness: 0.10 X 0.14 mm (0.0039 X 0.0055in.)	30 typical
Labels***		Thickness: 0.10 X 0.14 mm (0.0039 X 0.0055in.)	10 typical
Envelopes		up to 90g/m^2 (16 to 24lb)	up to 10

**The printer supports a wide range of media sizes. See "Printing on Card Stock or Custom-sized Materials" on page 2.20.*
***Capacity may vary depending on media weight and thickness, and environmental conditions.*
****Smoothness: 100 to 250 (Sheffield)*

NOTE: You may experience jams when using print materials with a length of less than 140mm (5.5in.). For optimum performance, ensure that you are storing and handling the paper correctly. Please refer to "Printer and Paper Storage Environment" on page E.7.

Guidelines for Using Paper

For the best result, use conventional 75g/m^2 (20lb) paper. Ensure that the paper is of good quality, and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, and curled or bent edges.

If you are unsure of what type of paper you are loading, such as bond or recycled paper, check the label on the package.

The following problems may cause print quality deviations, jamming or even damage to the printer.

Symptom	Problem with Paper	Solution
Poor print quality or toner adhesion, problems with feeding	Too moist, too rough, too smooth or embossed; faulty paper lot	Try another kind of paper, between 100 ~ 250 Sheffield, 4 ~ 5% moisture content.
Dropout, jamming, curl	Stored improperly	Store paper flat in its moisture-proof wrapping.
Increased gray background shading/printer wear	Too heavy	Use lighter paper, open the rear output tray.
Excessive curl problems with feeding	Too moist, wrong grain direction or short-grain construction	Use long-grain paper.
Jamming, damage to printer	Cutouts or perforations	Do not use paper with cutouts or perforations.
Problems with feeding	Ragged edges	Use good quality paper.

NOTES:

- Do not use letterhead paper printed with low-temperature inks, such as those used in some types of thermography.
- Do not use raised or embossed letterhead.
- The printer uses heat and pressure to fuse toner to the paper. Insure that any colored paper or preprinted forms use inks that are compatible with this fusing temperature (180°C or 356°F for 0.1 second).

Paper Specifications

Category	Specifications
Acid Content	5.5 ~ 8.0pH
Caliper	0.094 ~ 0.18mm (3.0 ~ 7.0mils)
Curl in Ream	Flat within 5mm (0.02in.)
Cut Edge Conditions	Cut with sharp blades with no visible fray.
Fusing Compatibility	Must not scorch, melt, offset, or release hazardous emissions when heated to 180°C (356°F) for 0.1 second.
Grain	Long Grain
Moisture Content	4% ~ 6% by weight
Smoothness	100 ~ 250 Sheffield

Paper Output Capacity

Output Tray	Capacity
Face-down	250 sheets of 75g/m^2 bond paper

Paper Input Capacity

Input Tray	Capacity
Cassette	250 sheets of 75g/m^2 bond paper
MP tray	100 sheets of 75g/m^2 bond paper
Optional tray	500 sheets of 75g/m^2 bond paper

Printer and Paper Storage Environment

Paper storage environmental conditions directly affect the feed operation.

Ideally, the printer and paper storage environment should be at or near room temperature, and not too dry or humid. Remember that paper is hygroscopic; it absorbs and loses moisture rapidly.

Heat works with humidity to damage paper. Heat causes the moisture in paper to evaporate, while cold causes it to condense on the sheets. Heating systems and air conditioners remove most of the humidity from a room. As paper is opened and used, it loses moisture, causing streaks and smudging. Humid weather or water coolers can cause the humidity to increase in a room. As paper is opened and used it absorbs any excess moisture, causing light print and dropouts. Also, as paper loses and gains moisture it can become distorted. This can cause paper jams.

Care should be taken not to purchase more paper than can be used in a short time (about 3 months). Paper stored for long periods may experience heat and moisture extremes, which can cause damage. Planning is important to prevent damage to large supplies of paper.

Unopened paper in sealed reams can remain stable for several months before use. Opened packages of paper have more potential for environment damage, especially if they are not wrapped with a moisture-proof barrier.

The paper storage environment should be properly maintained to ensure optimum printer performance. The required condition is 20° to 24°C (68° to 75°F), with a relative humidity of 45% to 55%. The following guidelines should be considered when evaluating the paper's storage environment:

- Paper should be stored at or near room temperature.
- The air should not be too dry or too humid.
- The best way to store an opened ream of paper is to rewrap it tightly in its moisture-proof wrapping. If the printer environment is subject to extremes, unwrap only the amount of paper to be used during the day's operation to prevent unwanted moisture changes.

Envelopes

Envelope construction is critical. Envelope fold lines can vary considerably, not only between manufacturers, but also within a box from the same manufacturer. Successful printing on envelopes depends upon the quality of the envelopes. When selecting envelopes, consider the following components:

- Weight: The weight of the envelope paper should not exceed 90g/m^2 (24lb) or jamming may occur.
- Construction: Prior to printing, envelopes should lie flat with less than 6mm (0.25in.) curl, and should not contain air.
- Condition: Envelopes should not be wrinkled, nicked, or otherwise damaged.
- Temperature: You should use envelopes that are compatible with the heat and pressure of the printer.
- Size: You should only use envelopes within the following size ranges.

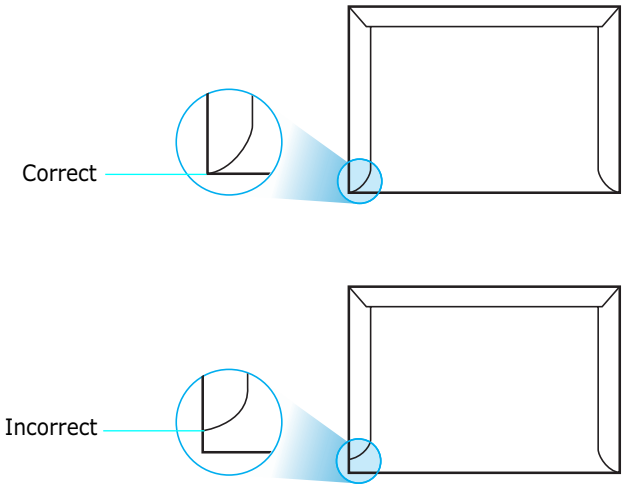
	Minimum	Maximum
Multi-purpose Tray	90 X 140mm (3.5 X 5.5in.)	216 X 356mm (8.5 X 14in.)

NOTES:

- Use only the Multi-purpose Tray to print envelopes.
- You may experience some paper jams when using any media with a length less than 140mm(5.5in.). This may be caused by paper that has been affected by environmental conditions. For optimum performance, make sure you are storing and handling the paper correctly. Please refer to "Printer and Paper Storage Environment" on page E.7.

Envelopes with Double Side Seams

Double side-seams construction has vertical seams at both ends of the envelope rather than diagonal seams. This style may be more likely to wrinkle. Be sure the seam extends all the way to the corner of the envelope as illustrated below.



Envelopes with Adhesive Strips or Flaps

Envelopes with a peel-off adhesive strip or with more than one flap that folds over to seal must use adhesives compatible with the heat and pressure in the printer. The extra flaps and strips might cause wrinkling, creasing, or even jams and may even damage the fuser.

Envelope Margins

The following gives typical address margins for a commercial #10 or DL envelope.

Type of Address	Minimum	Maximum
Return address	15mm (0.6in.)	51mm (2in.)
Delivery address	51mm (2in.)	89mm (3.5in.)

NOTES:

- For best print quality, position margins no closer than 15mm (0.6in.) from the edges of the envelope.
- Avoid printing over the area where the envelope's seams meet.

Envelope Storage

Proper storage of envelopes helps contribute to print quality. Envelopes should be stored flat. If air is trapped in an envelope, creating an air bubble, then the envelope may wrinkle during printing. See "Printing on Envelopes" on page 2.14.

Labels

CAUTIONS:

- To avoid damaging the printer, use only labels recommended for laser printers.
- To prevent serious jams, always use the Multi-purpose Tray to print labels and always use the rear output tray.
- Never print on the same sheet of labels more than once and never print on a partial sheet of labels.

When selecting labels, consider the quality of each component:

- Adhesives: The adhesive material should be stable at 180°C (356°F), the printer's fusing temperature.
- Arrangement: Only use labels with no exposed backing between them. Labels can peel off sheets with spaces between the labels, causing serious jams.
- Curl: Prior to printing, labels must lie flat with no more than 13mm (5in.) of curl in any direction.
- Condition: Do not use labels with wrinkles, bubbles, or other indications of separation.

See "Printing on Labels" on page 2.16.

Transparencies

Transparencies used in the printer must be able to withstand 180°C (356°F), the printer's fusing temperature.

CAUTION: To avoid damaging the printer, use only transparencies recommended for use in laser printers.

See "Printing on Transparencies" on page 2.17.

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